

**ASSESSMENT OF THE EFFECTIVENESS OF E-GOVERNMENT
INITIATIVES IN PUBLIC ADMINISTRATION: CRITICAL LOOK AT DAR
ES SALAAM CITY COUNCIL, TANZANIA**

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CERTIFICATION

The undersigned certifies that he has read and hereby recommends for acceptance by the Open University of Tanzania a dissertation titled, ***“Assessment of the Effectiveness of E-Government Initiatives in Public Administration: Critical look at Dar es salaam City Council, Tanzania”***, in partial fulfillment of the requirements for the Degree of Master of Business Administration (Leadership & Corporate Governance) of the Open University of Tanzania.

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.....

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DECLARATION

I, Lusekelo Thompson Mwakyusa, do hereby declare that this dissertation is my own original work and it has not been presented for a similar or any other award to any other University.

.....

Signature

.....

Date

DEDICATION

This research is dedicated to my beloved wife Lilian and my two lovely daughters,
Lauren & Lynn.

ACKNOWLEDGEMENT

I would like to express my sincere gratitude to a number of individuals, organizations and authors who have contributed, to my field research and thesis writing, but it is impossible to mention all of them here. However, to them all, I am grateful and thankful for their contribution, advice and assistance. I highly appreciated their valuable contributions. Special thanks should however be given to my supervisor, Dr. E.N. Nfuka of the Open University of Tanzania for his assistance, guidance, suggestions and encouragement to me throughout all the stages of my research which have resulted into successful completion of this study.

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ABSTRACT

This study aimed at assessing “Effectiveness of E-government initiatives in Public Administration in Tanzania, scope of the study being Dar es Salaam City Council, Tanzania”. It intends to highlight the ineffectiveness of the e-government initiatives on the public sector and key areas which can be worked on in order to ensure that the intended objectives of the e-government initiatives are met as well as to assist in creating awareness and full understanding of e-government and its expected impact on the public sector in enhancing service delivery to the general public and improving work efficiency. Situational analysis shows that the government has carried out/ implemented various e-government initiatives which costs huge sum of money but have not been able to provide the intended end results thus making them ineffective. The main key words for this study are; e-Government, Public Administration and Effectiveness. A case study approach was selected and used due to the nature of the study. Total sample of 75 which is 28% of the population was picked from Dar es Salaam City Council by simple random and purposive sampling methods. Data for this study were collected by questionnaires, interviews, observation and review of the DCC website with a response of 71 staff which is 95% of the sample, and qualitative analysis method was used to process the data. The study revealed that original intended output of the already implemented ICT systems and applications as part of e-government initiatives have not been met to a large extent.

TABLE OF CONTENTS

CERTIFICATION	ii
COPYRIGHT	iii
DECLARATION.....	iv
DEDICATION.....	v
ACKNOWLEDGEMENT.....	vi
ABSTRACT	vii
LIST OF TABLES	xiii
LIST OF FIGURES	xv
LIST OF APPENDICES	xvi
LIST OF ABBREVIATIONS	xvii
CHAPTER ONE	1
INTRODUCTION.....	1
1.1 Background to the Research Problem.....	1
1.2 Statement of the Research Problem	5
1.3 Research Objectives.....	6
1.3.1 Specific Objectives	6
1.4 Research Questions.....	6
1.5 Rationale	7
1.6 Scope and Limitation of the Study	7
1.6.1 Scope.....	7
1.6.2 Limitations	7
1.6.3 Delimitation	8

1.7	Organization of the Study	8
CHAPTER TWO		9
LITERATURE REVIEWS		9
2.1	Overview	9
2.2	Conceptual Definition	9
2.2.1	E-Government	9
2.2.2	Public Administration	13
2.2.3	Effectiveness	15
2.3	Theoretical Analysis of Relevant Studies	16
2.4	Empirical Analysis of Relevant Studies	24
2.4.1	General Studies	24
2.4.2	Studies in Africa	26
2.4.3	Empirical Studies in Tanzania	28
2.5	Research Gap Identified	30
2.6	Theoretical Framework	30
2.7	Conceptual Framework	31
2.8	Statement of Hypotheses	32
2.9	Summary	33
CHAPTER THREE		34
RESEARCH METHODOLOGY		34
3.1	Overview	34
3.2	Research Strategies	34
3.2.1	Survey Population	35
3.2.2	Area of the Research or Survey	35

3.2.3	Population of the Study.....	35
3.3	Sampling Design and Procedures	35
3.4	Variables and Measurements Procedures	36
3.4.1	Methods of Data Collection.....	36
3.4.2	Secondary Data	36
3.4.3	Primary Data	36
3.5	Validity and Reliability.....	37
3.6	Assumptions.....	37
3.7	Data Processing and Analysis.....	37
CHAPTER FOUR.....		38
DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS ...		38
4.1	Overview.....	38
4.2	Response Rate.....	38
4.3	Responses to Research Questions.....	39
4.3.1	What is the Current State of e-Government Initiatives and Usage in the Dar es Salaam City Council?	39
4.3.2	What is an Overall Awareness of Usage and Application of e-Government Tools by Public Servants and Customers of DCC?	50
4.3.3	To what Extent do the Benefits of e-Government have been Realized with Respect to the Expected Benefits at the DCC?.....	55
4.3.3.1	Reduced Daily Work Load	55
4.3.3.2	Improved Turnaround Time (TAT)	55
4.3.3.3	Improved Overall Team's Performance and Efficiency	56
4.3.3.4	Reduced Number of Complaints.....	56

4.3.3.5	Reduced Manual Processes.....	57
4.3.3.6	Reduced Redundant Staff	57
4.3.3.7	Increased Rate of Customer/ Citizen Interactions	58
4.3.3.8	Reduced Bureaucratic Transactional Processes and Lack of Transparency ..	58
4.4	Variables Analysis for this Study	59
4.4.1	Quality of Public Service Delivery	59
4.4.2	Work Efficiency.....	60
4.4.3	Government Information Flow to Citizens.....	60
4.4.4	Cost of Delivering Service.....	60
4.4.5	Resource Utilization	61
4.4.6	Accountability and Transparency	61
4.4.7	Productivity Among Public Servants.....	61
4.4.8	Citizens' Participation.....	62
CHAPTER FIVE		63
SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS		63
5.1	Introduction.....	63
5.2	Summary of Findings.....	63
5.2.1	Current State of e-Government Initiatives Implementation and Usage in DCC	63
5.2.2	Overall Awareness of Usage and Application of E-Government Systems by Public Servants	64
5.2.3	Benefits of e-Government Realized at DCC.....	65
5.3	Conclusion	66
5.4	Recommendations.....	67

5.5	Areas for Further Research	68
REFERENCES.....		69
APPENDICES		72

LIST OF TABLES

Table 4.1:	Frequency Distribution by Department	39
Table 4.2:	Department Percentage	39
Table 4.3:	Projects	40
Table 4.4:	Reliable and Stable Internal Mailing System	42
Table 4.5:	Reliable and Sufficient Internet Connection.....	43
Table 4.6:	Website is being Updated Frequently and Contains Most Current Information	45
Table 4.7:	Provision of Government Information Through Electronics Means	46
Table 4.8:	Online Transactions for General Public	47
Table 4.9:	Available ICT Facilities Status	47
Table 4.10:	Telephone & Fax Lines are Working and in Operational.....	48
Table 4.11:	Computers are Working and in Good Condition	48
Table 4.12:	Sufficient Imaging Services with all Devices in Operational Printers Copiers and Scanners	49
Table 4.13:	ICT Systems, Tools and Applications Implemented	50
Table 4.14:	Use Computer for More than 50% of the Tasks	51
Table 4.15:	All Staff in the Department can use Computer.....	51
Table 4.16:	Use of Office Email in Official Communication.....	52
Table 4.17:	Official Communication are Through Office E-mail System, Telephone and Fax.....	52
Table 4.18:	Attended Awareness Workshop on ICT in the Last 12 Months.....	53

Table 4.19: Awareness Programs to Citizens on how to use and Access Government Information Through Electronic Means	53
Table 4.20: High Rate of Utilization of E-Government Initiatives by Citizens	54
Table 4.21: Electronic Communication Devices has Reduced the Daily Work Load	55
Table 4.22: Use of Electronic Communication Devices has Reduced the Turnaround Time in Serving/ Responding to Customers	55
Table 4.23: Use of Electronic Communication Devices has Improved Overall Performance and Efficiency of the Team	56
Table 4.24: Use of Electronic Communication Devices has Reduced the Number of Complaints in the Department	57
Table 4.25: Use of Electronic Communication Devices has Reduced the Number of Manual Processes in the Department	57
Table 4.26: Use of Electronic Communication has Reduced a Number of Redundant Staff in the Department	58
Table 4.27: Use of Electronic Communication has Increased the Rate of Customer/ Citizen Interaction	58
Table 4.28: Use of Electronic Communication has Reduced Bureaucracy and Lack of Transparency in the Department.....	59

LIST OF FIGURES

Figure 2.1: NICTBB Network Coverage Map.....	23
Figure 2.2: e-Government Variable Factors	32

LIST OF APPENDICES

Appendix 1: Questionnaires.....	72
Appendix 2: Interview Schedule.....	78
Appendix 3: DCC Website Survey Results	82
Appendix 4: Research Budget.....	91
Appendix 5: Research Permission Letter.....	92

LIST OF ABBREVIATIONS

AD	Active Directory
CCTV	Closed Circuit Television
CSRP	Civil Service Reform Program
DC	Domain Controller
DCC	Dar es Salaam City Council
EGA	Electronic Government Agency
FDI	Foreign Direct Investment
FTE	Full Time Employees
G2B	Government to Business
G2C	Government to Citizens
G2G	Government to Government
HCMIS	Human Capital Management Information System
HR	Human Resources
ICT	Information Communication Technology
IFMS	Integrated Financial Management System
IPA	Investment Promotions Authority
IT	Information Technology
KSA	Kingdom of Saudi Arabia
LGA	Local Government Authorities
MDA	Ministries Departments and Agencies
MMS	Multi Media Service
MOFEA	Ministry of Finance And Economic Affairs
MRECOM	Municipal Revenue Collection & Monitoring
NECTA	National Examinations Council of Tanzania

NICTBB	National ICT Broadband Backbone XV
NPM	New Public Management
PABX	Private Automatic Branch Exchange
POP	Point Of Presence
POPSM	President's Office Public Service Management
PSRP	Public Service Reform Program
RCIP	Regional Communications Infrastructure Program
SIM	Subscriber Identity Module
SMS	Short Message Service
SSA	Sub Saharan Africa
TCRA	Tanzania Communication Regulary Authority
TIC	Tanzania Investment Centre
TRA	Tanzania Revenue Authority
TTCL	Tanzania Telecommunication Company
UN	United Nations
ZIPA	Zanzibar Investment Promotion Authority

CHAPTER ONE

INTRODUCTION

1.1 Background to the Research Problem

Public administration has undergone reforms or changes in order to keep pace with wider transformation processes that are being attempted in society. The reforms were primarily categorized into two; the traditional public administration and the contemporary public administration widely known as New Public Management (NPM) in which e-government forms part of the latter.

For the case of Tanzania, since independence the public sector management has undergone through several reforms and transformations efforts led by political forces, economic challenges, need to improve service provision, need to increase efficiency, ideological changes, and external forces.

Some key reforms of the Tanzanian public sector since independence includes; adoption of self-reliance policy (late 1960's), which was intended to bring public services closer to the people whom majority lived in the rural areas, civil service reform program (CSRP – 1993), which focused on cost containment and the restricting of the government, public service reform program (PSRP – 2000), whose main focus was to improve MDAs' service delivery and regulatory functions, Lufunyo (2013), PSRP phase II strategy (2007).

Public administration reforms which took place as from 1990's going forward are categorized as part of NPM which aimed at modernizing and rendering more effective and efficient public services. Among the remarkable products of NPM

reforms is e-government initiative, whose main aim is to improve the managerial effectiveness and overall performance of the public sector. The Government of Tanzania recognized the importance of e-government in administering and rendering public services and thus embraced these initiatives.

As per the National ICT Policy (2003), we are told that since the mid-1990's, the public service of Tanzania has initiated a series of measures for transforming itself into becoming more efficient, effective, and customer-oriented. These efforts have put in place the foundation for what is now known as e-government, while sectorial reforms recognize and promote the use of ICT in their respective sectors.

We can also see that the Government has committed to implement the e-government across the country as per the 2012 e-Government strategy. Based on above various efforts have so far already been done to deploy e-government initiatives in Tanzania which includes internal processes reforms, provision of government information through electronic means, and offering online transactions for the general public.

Some of the specific initiatives include the country's Public Service Reform Program (PSRP), Phase II, whose focus was to promote e-government and knowledge management as a means of improving governance and service delivery by moving forward to enhance its ICT infrastructure and develop its capability to deliver services using new technologies, (Hoyle and Wamukoya, 2007).

Also the Government has established the e-Government Agency (eGA) under the President's Office Public Service Management (POPSM). The agency became

operational in April, 2012. The eGA is an implementation arm of e-government in Tanzania. The Agency is expected to advise, coordinate and oversee the implementation of initiatives related to e-Government in the country. Specific areas of focus include improving ICT human capital, creating an enabling environment for e-services implementation and access; improvement of ICT shared resources within public service; coordinating, managing and enforce compliance for e-Government initiatives and lastly providing e-Government advisory services, technical support and consultancy services, Nungu (2013).

Despite these efforts, e-Government initiatives in the country have been at times ad-hoc and uncoordinated. This is hardly surprising, given that the world of e-Government is barely more than a decade old and is continually evolving and changing with the advent of new and more advanced ICTs, National e-Government Strategy (2013)

A number of studies have also been carried out with regard to e-government and public administration and shows that the emergence of electronic government — both in practice and in concept — has been one of the important developments in public administration and is increasingly becoming a fundamental tool for enhancing public administration, (Brown, 2005; Njuru, 2011).

The e-government initiative is not only in Tanzania, if we look at our neighbouring country Kenya, e-government was launched in 2004 by the administration of President Mwai Kibaki. According to the President, the main objectives of implementing e-government were to enhance delivery of public services, improve

information flow to citizens, promote productivity among public servants, and encourage citizens' participation. Literature showed that such objectives are not uniquely Kenyan or Tanzanian but global expectations (Adeboye, 1995; Heeks, 2002; Herman, 1996; Holzer, 2004; Kenny, 2001; Welch et al., 2005; World Bank, 2002b), as cited by Njuru (2011).

As we have already seen, e-government is part of public administration whose main objective is to improve overall performance of public sector. Also we have noted that for the case of Tanzania several e-government initiatives have already been carried out/ implemented on different public organizations since the emergence of e-government with the same aim of improving the organization's performance.

However due to several factors it is unfortunate that apart from the government's efforts to support e-government initiatives a number of related projects implemented in the public sector organizations have not been able to provide the intended end results. Some of the issues found on these organizations include; systems implemented not being utilized partly or fully. On some other cases, implementation projects are being abandoned before completion, duplication of work i.e. staffs in public sector making use of both legacy and automated processes etc. Thus in general we see that these initiatives are ineffective.

Some of the key factors contributing to such situations include; resources, skill gap, lack of awareness, lack of management and political support/ will, inadequate e-readiness, etc. This is a big problem to our country as a lot of financial resources are committed into implementation of these initiatives with a view of return on

investment (ROI) in terms of improved performance, efficiency and operational cost cutting, so when these are not being realized after such huge investments it is a loss to both the Government and citizens (tax payers).

1.2 Statement of the Research Problem

The government of Tanzania recognized the imperativeness of ICT in enhancing public sector service delivery and work efficiency in order to meet the public needs in a more responsive and transparent way; thus it embarked on several e-government implementation initiatives on both MDAs' and LGAs' which includes internal processes reforms, online information sharing, and offering online transactional services to the public.

Situational analysis shows that various equipment and technologies currently exist in public sector offices (MDAs' and LGAs') specifically in municipal offices as a result of e-government implementation initiatives e.g. telephone lines, fax, printers, computer systems, CCTV systems, internet connection, websites and other specialized systems and applications. However the benefit realization of the already implemented e-government tools so far does not seem to be obtained by the public, in other words I can say that e-government initiatives are currently ineffective in the context of Tanzania.

This ineffectiveness can be traced through inadequate e-government awareness to the public servants and citizens, unavailability of updated and more useful information on websites, delayed service provision, inconvenient access to government information, faulty telephone lines for extended periods, out of order fax

lines, bureaucratic transactional processes, poor record management, lack of transparency etc.

1.3 Research Objectives

The general objective of this research is to assess the effectiveness of e-government initiatives already implemented in public administration, focus being on the Dar es Salaam City Council (DCC).

1.3.1 Specific Objectives

- (i) Examine the current status of the e-government initiatives at the Dar es Salaam City Council seeking to know what have been implemented and in use today.
- (ii) Examine awareness and usage of e-government applications at the Dar es Salaam City Council (staff and sampled key customers).
- (iii) Examine the realized benefits of e-government initiatives implemented v/s expected benefits at the Dar es Salaam City Council.

1.4 Research Questions

The following questions guide the study:

- 1.4.1 What is the current state of e-government implementation initiatives in the Dar es Salaam City Council?
- 1.4.2 What is an overall awareness of usage and application of e-government systems by public servants and customers of the Dar es Salaam City Council?
- 1.4.3 To what extent do the benefits of e-government have been realized with respect to the expected benefits at the Dar es Salaam City Council?

1.5 Rationale

The research intends to highlight the ineffectiveness of the e-government initiatives on the public sector and key areas which can be worked on in order to ensure that the intended objectives of the e-government initiatives are met.

The research will also assist in creating awareness and full understanding of e-government and its expected impact on the public sector in enhancing service delivery to the general public and improving work efficiency. As cited from (Nengomasha, et al., 2010), also the findings of this study, will be useful to policy makers and planners in the design of e-government projects, particularly to minimize risk and ensure that the public service gets the most benefit from investment in e-government initiatives.

1.6 Scope and Limitation of the Study

1.6.1 Scope

Dar es Salaam City Council structure is made up of three main organs, the councilors platform which is made up of all Dare es salaam councilors, the office of city director and the three Dar es salaam municipals namely Ilala, Kinondoni & Temeke. The study has covered mainly the office of the city director and its departments. The researcher has decided to take this area as a representative sample because of time limitation and it is the one with significant e-government initiatives in place.

1.6.2 Limitations

The goal of the study was to survey all three municipals of Dar es Salaam (Ilala, Kinondoni & Temeke) plus the Dar es Salaam City Council, however due to time

and resource limitations it was not be possible to cover all of them so only the DCC was be covered on this study. This is an area where e-government initiatives are being planned, implemented and operated.

1.6.3 Delimitation

The study has covered the office of the DCC director and its departments namely; department of finance, administration and personnel; department of construction and firefighting services; department of waste management; department of urban planning, environment and transportation; and department of health services.

1.7 Organization of the Study

This study report is organized in five chapters. The first chapter presents introduction to the study in which the background information related to the study is provided. This chapter also presents the statement of the problem, objectives of study, justification and organization of the study. Second chapter presents the literature review including defining key terms used in the study and theoretical and empirical studies related to the effectiveness of e-government in public administration. Third chapter presents the design and methodology used in the study, sampling design, sample size as well as validity and reliability. Fourth chapter presents the findings of the study. It also discusses these findings. The fifth chapter summarizes, concludes and gives recommendations. It also suggests areas for further research.

CHAPTER TWO

LITERATURE REVIEWS

2.1 Overview

This chapter presents a literature related to the topic under study, apart from defining the key concepts it is also presenting theoretical and empirical studies related to the topic and lastly provides the conceptual framework of the study.

2.2 Conceptual Definition

2.2.1 E-Government

There are quite a number of different definitions of e-government from different perspectives.

Gant (2010) says that as governments in developing countries made choices to pursue public administration reforms, many are using ICTs to offer e-government services. Thus e-government is the centerpiece of information systems-supported reforms to digitize the delivery of services and the process of governance occurring across all levels of government. E-government utilizes the Internet and the World Wide Web for both service delivery and information dissemination.

We are told that e-government is the use of information and communication technologies in government to provide public services to improve managerial effectiveness and to promote democratic values and mechanisms; as well as a regulatory framework that facilitates information intensive initiatives and fosters the knowledge society (Gil-Garcia and Luna-Reyes, 2003). E-government also known as

digital government, online government, or transformational government, has been defined as the delivery of public information and services through the use of ICTs (Heeks, 2002; Norris, 2004; Seed, 2007; Sharma & Gupta, 2003).

On the World Bank report (2001) e-government has been defined as; “The government-owned or operated systems of information and communication technologies that transform relations with citizens (C), the private sector (B) and other government agencies (G) so as to promote citizens’ empowerment, improve government efficiency and service delivery, strengthen accountability and increase transparency”. Here e-Government is referred to the way in which Government interacts with the different public segments; i.e. interaction with Citizens (G2C), interaction with businesses (G2B), and interaction with other Government agencies (G2G).

Monga (2008) and Mutula (2012) further clarify the key functions of the main three areas of e-Government interactions; Government to citizen (G to C) facilitates citizen interaction with government, which is primary goal of e-government. This attempts to make transactions, such as payment of taxes, renewing licenses and applying for certain benefits, less time consuming and easy to carry out.

Government to business (G to B) includes both the procurement of goods and services by the government as well as the sale of surplus government goods to the public on line. In many respects, the Government to Government (G to G) represents the backbone of e-government which involves sharing data and conducting electronic exchanges between various governmental agencies.

Also based on Mirandilla (2008) we can see that e-Government—the application of ICTs to improve the activities of public sector organizations—is widely seen as a means to promote efficiency in public administration. As various studies have shown, e-Government goes beyond the introduction of technology. It calls for a paradigm shift— reforms in organizations, new forms of leadership, and transformation of public-private partnerships—to make its impact effective (Allen et al, 2001).

Ngulube (2010), on his paper defined electronic Government as an innovative attempt to take advantage of information and communication technologies (ICTs) to facilitate the citizens' access to government information and services in order to support social, economic and political development and provide an avenue for the public to interact with government institutions and processes in a democratic, transparent and equitable way. He further narrates that e-government has the possibility of improving service delivery and enhancing the relationship between the government and the public.

E-Government can be defined in so many ways, however the Tanzania e-Government strategy (2012) states” e-Government is the use of ICT to enhance work efficiency and improve service delivery in order to meet the needs of public in a responsive and transparent manner”.

We can see that of the many definitions of e-government above, all reflect the same thing; that is, it is about government employing information and communication technologies (ICT) to democratize access to information and enhance service

delivery to its customers which include citizens and businesses (Nengomasha et al. 2010).

In general, on countries perspectives, while others limit the definition only to online and/ or internet based technologies some countries use a wider definition of e-government to include all electronic delivery of services such as telephone, fixed lines, fax, mobile phones, short message services (SMS), multimedia messaging services (MMS), wireless networks and services, television and radio – based delivery of government services in addition to the use of the Internet (INTOSAI, 2005) cited in (Nengomasha et al. 2010) and (Anttiroiko and Malkia 2006; Heeks 2004).

Now for the sake of this study, the definition of e-Government will take a wider scope of electronic service delivery means in addition to online and internet based technologies. From the definitions given in the literature e-government may be characterized as an innovative attempt to take advantage of information and communication technologies to facilitate access to government information and services in order to support social, economic and political development, improve the quality of public services, and provide an opportunity for government to government (G2G), government to business (G2B) and government to citizens (G2C) communication.

It is evident from the foregoing that e-government has the possibility of increasing honesty, efficiency and effectiveness, justice, equity, accountability and participatory democracy in the interaction between the government and the citizens. From above

definition of terms we find that generally e-Government is mainly part of modernized Public Administration.

2.2.2 Public Administration

Public administration is another key word on this study, which is a part of the wider term “Administration”. To clearly understand the meaning of public administration we must, therefore, first understand what administration means. Administration comes from a word administer which is derived from the Latin words administrate, which means to care for or to look after people, to manage affairs.

Administration consists of all those operations, which aim at achieving specific purpose shared by two or more people. To put it differently, administration is a cooperative human effort toward achieving some common goals. It is thus a goal – oriented, purposive, cooperative, joint activity undertaken by a group of people (NOUN, 2012).

James L. McCanny defined administration as the organization and use of people and materials to accomplish a purpose. It is the specialized vocation of managers who have skills of organizing and directing people and materials just as definitely as the engineer has the skill of building structure or a doctor has the skill of understanding human ailments”, Das (2007). From the above definitions, it becomes clear that administration is essentially a group activity which involves co-operation and coordination to achieve desired goals or objectives. This also means that administration has an element of rationality. Administration is thus a rational action, an endeavor to maximize the achievement of goals or objectives, by a group of

human beings. Thus the word administration in this context means to execute the policy of government to serve public.

In a broad sense, therefore, Administration is common to both public and private affairs. Public Administration would then refer to that part of administration which pertains to the administrative activities of the government. Here again, it would be worthwhile to turn to the definitions of public administration given by some well-known scholars. Prof. Woodrow Wilson, the pioneer of the social science of Public Administration says in his book 'The study of Public Administration', published in 1887 "Public Administration is a detailed and systematic application of law." Also according to Simon (1970); - "By Public Administration is meant the activities of the executive branches of the national, state, & local governments."

According to Willoughby (1927); - "Public Administration in broadest sense denotes the work involved in the actual conduct of governmental affairs, and in narrowest senses denotes the operations of the administrative branch only." White (1948); was according to him, public administration "consists of all those operations having for their purpose the fulfilment of enforcement of public policies as declared by the competent authority." Gladden (1961) maintains that public administration is concerned with the activities of government and that the word administration means to care or look after people, to manage their affairs and that an administrator is a servant and not a master.

Also we are told that public administration relates to the activities of the executive branch of government, deals with the formulation and implementation of public

policies and involves issues of human behavior and co-operative human effort (Stillman, 1980). On the other side, Waldo (1994) explains that public administration is both an area of inquiry and an activity, which means that for a theory to exist; it must describe and explain the boundaries for inquiry as determined by the activity itself. The challenge to theorizing on public administration is found in the duality of its existence – the art of administration describes and explains its human interaction; the science of administration is embedded in its generic functions and operation within a political environment.

The New Public Management (NPM) is an approach to introducing reform in the public sector that looks to the private markets as a model for efficiency. It promotes a government that is customer oriented, performance-based, pro-competition, and decentralized. On the other hand, e-Government is the use of ICTs to improve the activities of the public sector. Therefore, e-Government is seen as a reform element that can support and enforce the NPM (Mirandilla, 2008)

2.2.3 Effectiveness

Effectiveness is also another key word used on this study which worthy being defined. Effectiveness is defined as the capability of producing a desired result. When something is deemed effective, it means it has an intended or expected outcome, or produces a deep, vivid impression (Dictionary.com, 2011).

Also effectiveness can be defined as the degree to which something is successful in producing a desired result; Or the degree to which objectives are achieved and the extent to which targeted problems are solved. Another definition of effectiveness is

“adequate to accomplish a purpose; producing the intended or expected result”. In general, effectiveness is the extent to which stated objectives are met — to be able to achieve what was intended to be achieved. The goal can be as broad or as narrow as is deemed appropriate — a continuum exists, ranging from achieving very specific outputs (such as ‘increasing the number of solar heating panels installed in new houses’) to very general outcomes (such as ‘improving the environment’ or even ‘improving community living standards or wellbeing’) (Productivity Commission, 2013)

2.3 Theoretical Analysis of Relevant Studies

With regard to our subject “Assessment of the Effectiveness of e-Government Initiatives in Public Administration” several studies similar or closer to this have been done on different parts of the world and provided different results. However results on studies done on developing countries specifically Africa tends to be the same. Let’s look and discuss some of those studies and theories.

Dada (2006); on his study tells us that while there is much hype about success stories of e-Government, the bitter truth that presents itself is that the majority of e-government projects in developing countries fail. On this regard we can say that according to Dada (2006) the majority of e-Government initiatives in developing countries do not bring about the desired results or the intended/ expected outcome. Dada (2006); further clarifies e-government failure as the inability of such a system to achieve predefined goals or other, previously unanticipated benefits. Gant (2008); provides a broad expectations of Governments from e-Government as to improve the quality of services and reduce the costs of delivering services. Other e-Government

goals are to improve the utilization of scarce resources, enhance accountability and transparency, expand the role of markets, and restore citizen trust and faith in government.

A further study by Chen (2007); which shows exactly what is being expected out of e-Government initiatives says “the ubiquity of communication and information technologies has significant implications for the ways in which the public sector conducts its business. The adoption of new technologies allows improvements in the delivery of public services, as well as the manner in which the work of the public sector is structured and undertaken”. Also cited from Kaaya (2010); we are told that the ultimate aim of e-Government is to improve performance (efficiency, effectiveness, transparency and accountability) of government. Kenya is among governments in Sub Saharan Africa implementing e-governments with the objective of enhancing free flow of information, citizens’ participation in the public policy processes, promoting productivity among the civil servants, and improving the delivery of public services (Njuru, 2011).

From those four studies of Dada (2006), Chen (2007), Kaaya (2010) and Njuru (2011) we can now start seeing the exact picture of what is being expected or intended out of the e-Government initiatives with regard to the public administration reforms. Those are the global expectations or goals of e-Government and not just specific to a certain part of the world.

Likewise the e-Government adoption is a global one as countries across the world have in recent years been adopting this concept in order to enhance their public

sectors service delivery. The growing adoption of e-Government by countries worldwide is a testimony to its role as an effective tool for public service delivery. In South Africa, it has been adopted as one of the cornerstones of the government's strategy for making services accessible to its citizens. Consequently, various national, provincial and local government e-Government initiatives have been implemented (Matavire et al. 2010).

A study by Chen (2007); reveals that most governments in New Zealand and Australia have been active in developing new approaches to the delivery of public services using technologies like the internet and telephony. One area of growing public sector activity is the use of these technologies to improve communication with key stakeholder groups in order to engage them in public management decisions that affect their lives.

Chen (2007) says that “the adoption of new technologies is, in part, a function of increasing accessibility and affordability. It also reflects a growing recognition of the dynamic and interactive potential of these technologies and their capacity to engage the public”.

These studies show that; the expectations of e-Government are the same globally and also the concept is globally being adopted by countries from all corners of the world, thus Tanzania is also not left out of this and as per the e-Government strategy 2012, e-Government is expected to help the Tanzania's government to engage and enhance the relationship with its clients through increased and enhanced digital services. Now let's further look on more studies regarding e-Government implementation/

initiative efforts already done and the outcomes or challenges being faced. Ngulube (2010) on his paper says that “Sub Saharan Africa (SSA) faces a lot of challenges when it comes to implementing e-government programs. The ICT infrastructure is weak and is not widely available to rural populations.

In most cases, both government officials and the people who may want to use government services online lack basic skills. Government information is not properly organized as records management systems in many countries are collapsing.” Ngulube (2010) went on and says “e-government projects are deficient in many countries in SSA, and they are grossly under resourced. Consequently, SSA may lose the opportunities offered by ICTs to improve government service delivery and foster democracy and accountability.”

The study by Ngulube above focused on Sub Saharan Africa of which the involved countries which are described as the developing countries similar to Tanzania, also faces similar shortcomings with regard to e-Government initiatives, as a results the intended results of those initiatives are not realized by both the governments and the citizens. Ngulube oh his paper further describes some of the major challenges hampers SSA countries from implementing e-Government as:

- (i) Lack of e-readiness for e-government;
- (ii) The existing telecommunications infrastructure does not reach the bulk of the population;
- (iii) Many countries lack an e-government strategy and vision;

- (iv) Many citizens are concerned about the privacy and confidentiality of the personal data they may provide as part of conducting e-business with government;
- (v) Many citizens are IT-illiterate
- (vi) The quality of government information is poor largely due to the breakdown of records management systems;
- (vii) Lack of commitment to e-government by many politicians;

Ngulube (2010) says; these factors partly hamper SSA from exploiting the potential benefits offered by the information society in order to give citizens value-added services that are likely to make Governments participatory and responsive to the political, social and economic needs of the citizens.

Another study of e-government initiatives as cited from Gant (2008); says, “Most governments around the world have gone no further than the billboard or partial service-delivery states of e-Government.” West (2005). West (2005) proceeded by saying that “not only that they are failing to use technology to transform the public sector, their efforts mostly consist of no meaningful change or small steps forward”.

We can see that more studies are revealing the ineffectiveness of the e-Government initiatives across the world. And such a situation is exactly what is facing the Government of Tanzania where by several e-Government initiatives have not been able to provide significant changes/ improvements of our public sector service provision, it's either a very small change or in some cases no change at all.

Regarding the rate at which e-Government projects fail the estimates vary from different studies, approximately 60% of e-Government projects fail. There are no official statistics on the failure rate of e-Government projects in developing countries. The UN Report, e-Government at the Crossroads, concludes that despite the very limited data on e-Government failures, the number of projects that fail is high (UN, 2003). Some analysts estimate the rate of failure of e-Government projects in countries with developing economies to be very high, at around 60-80% (with the higher rate of failure characteristic of Africa)” (Gant, 2008). Thus we can see that this is in fact a big problem globally and more seriously in Africa as a higher number of countries are impacted including Tanzania, and many are concerned about it including the UN itself.

Another study was done in Kenya by Njuru (2011); Implications of E-Government on Public Policy and Challenges of Adopting Technology: The case of Kenya. The paper discussed the e-government’s implications on public policy formulation and implementation in Kenya. In addition, the challenges of adopting technology and organizational change were also examined. The Key findings revealed that the Kenyan government has failed in disseminating information about e-government, sensitizing Kenyans on how to make use of technology to access government services, and providing incentives to encourage use of technology.

Hence despite the advantages touted globally for implementing e-government, literature showed no evidence that any of the Kenyan e-government’s objectives: enhancing delivery of public services, improving information flow to citizens, promoting productivity among public servants, and encouraging citizens’

participation has been achieved. (Yonazi et al., 2010) on their study —Exploring Issues Underlying Citizen Adoption of e-Government Initiatives in Developing Countries: The Case of Tanzania said “adoption plays an important role in the success of e-Government initiatives. Low adoption, particularly by citizens, indicates inadequate utilization and rejection of the initiatives by the intended users. This may lead into failure of e-Government initiatives. This is particularly important in the context of developing countries such as Tanzania where e-Government is a newly imported innovation.

Specifically for Tanzanian context, as per the National ICT Policy (2003) these issues might have been due to the lack of an overall policy and poor harmonization of initiatives, which led to random adoption of different systems and standards, unnecessary duplication of effort, and waste of scarce resources, especially through the loss of potential synergies. Therefore, a need for the National ICT policy deploys a broad-based national strategy to address Tanzania’s developmental agenda. Further the policy narrates that; despite the rapid improvements Tanzania’s ICT environment is still somewhat challenged.

Some of the major government’s efforts in improving the ICT environment such as the establishment and construction of the National Fibre Optic Cable network named as National ICT Broadband Backbone (NICTBB) which is managed and operated by the Tanzania Telecommunications Company Ltd (TTCL) on behalf of the government, is aimed to enhance usage of ICT applications for sustainable socio-economic development including implementation of e-government , e-learning, e-health, e-commerce and much more locally and globally. However the NICTBB has

so far established only 31 points of presence (PoPs) across the country mostly being urban areas as shown figure 2.1. Based on the research done by Kowero (2012), the NICTBB is not being utilized to its full potential of its installed capacity and even lower at its design capacity.

Another area of improvement in Tanzania's ICT is the mobile phone usage widespread, according to TCRA magazine, the Regulator (2013), there has been an exponential growth of subscribers reaching about twenty-million from one before TCRA was established in 2003 to over seven operating companies with about twenty eighty million SIM Cards in the market.

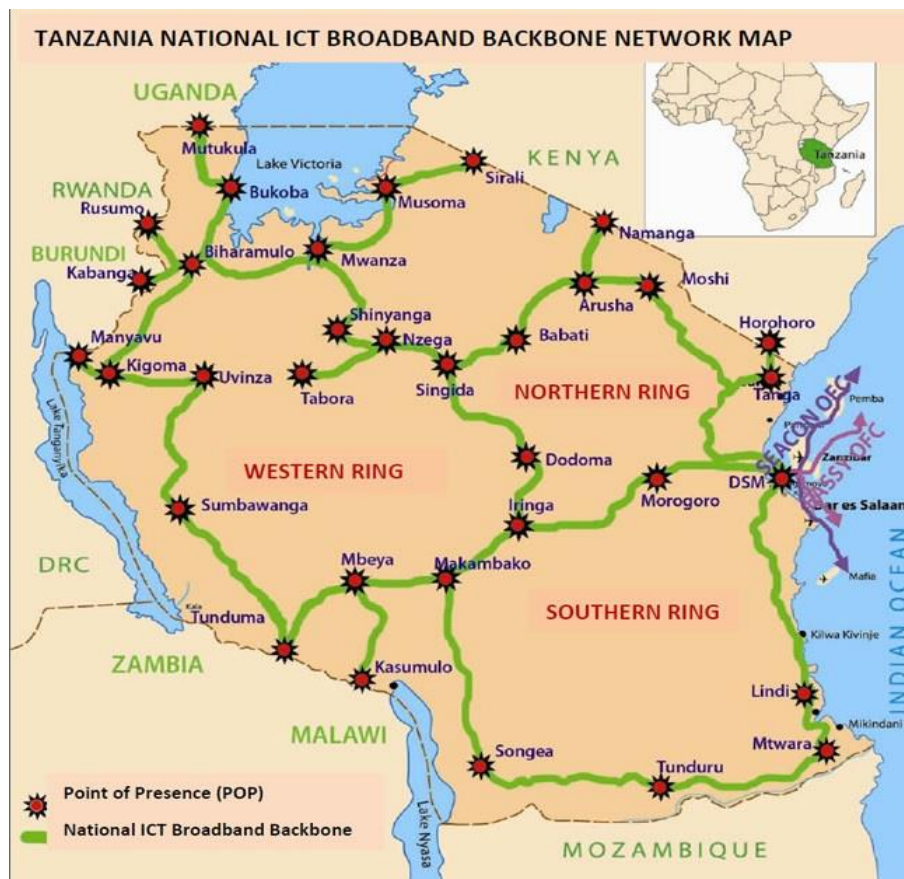


Figure 2.1: NICTBB Network Coverage Map

Source: NICTBB website

Mobile telephony has changed lives of Tanzanians with multiple mobile services such as mobile money transfer, payment of utility bill and many solutions in the use as well as other services that have eased their lives. However many of public sector institutions such as council authorities are still adamant in utilizing this mobile platform which has been well engineered by TCRA. ICT is concentrated in Dar es Salaam, the commercial capital with little deployment or access in other urban centers or in rural Tanzania, this result in failure for e-Government initiatives to reach majority of citizens.

2.4 Empirical Analysis of Relevant Studies

Here we are going to look and discuss some practical studies which have been done around the subject across different sects of the globe. The discussion will be segmented on the studies done on developed countries, then those done in Africa and lastly we will focus on studies done in Tanzania.

2.4.1 General Studies

A study by Iskender (2012), on Turkish e-Government Transformation analyzed detailed history of major developments between 1990 and 2011 and evaluated the success of transformation by using data obtained from local sources and also data obtained from international benchmark studies. The study revealed that there was a positive trend to realize the transformation in public institutions but the efficiency of the transformation was very low and decreasing day by day.

The findings noted that frequent changes experienced in the scope, function, integration and related institutions of the e-government projects plus the changes in

the general responsibility of coordinating the e-government transformation which experienced significant changes about three times had a negative impact on the overall success. Another study by Alshehri et al. (2012) a comprehensive analysis of e-Government services adoption in Saudi Arabia, empirically examined the challenges and barriers facing the adoption of e-Government in the Kingdom of Saudi Arabia (KSA) by gathering evidence from a survey of 460 citizens including IT department employee from different public sector. Based on the analysis of the data collected the researchers were able to identify 10 key barriers and challenges from these different perspectives and generated a list of possible recommendations. This study revealed that in KSA the e-Government initiatives are generally not effective.

Also on their second empirical study (Alshehri et al., 2012) analysis of citizens' acceptance for e-government services in the KSA; the findings revealed that the uses and achievements of e-government are few despite the fact that the public sector in KSA has promoted their e-government services for many years. Another empirical study on a developing country was done by Al-Jaghoub, et al. (2010) an evaluation of awareness and acceptability of using e-Government services in developing countries; the case of Jordan. Similar to other developing countries, Jordan started a national e-Government initiative aiming to streamline government procedures and make information and government services available to business and citizens online.

However the results from this study suggested that the awareness and acceptance of e-Government did not reach the required level. Above studies showed the failed e-government initiatives on different countries outside Africa, however there are also

some success stories from other countries with regard to e-Government initiatives. A study by Porumbescu et al. (2012) on their paper ‘The Influence of Context on Participatory E-Government Applications’ examined the e-Government adoption in two countries, Romania and South Korea. The results revealed a successful implementation of e-government initiative in South Korea. The empirical study analyzed the G4C Project of the South Korean Government whose main objective was to provide a better set of services to the public, as well as increase administrative efficiency and transparency.”

Another empirical study with a success story is by Gonzalez et al. (2008) on their paper e-government Success: some principles from a Spanish case study; The study mainly focused on Tax administration with an objective of continuously promoting compliance with tax duties, ensuring at the same time that tax administration becomes more efficient and transparent. The study indicated the progress of e-government in Spain which has undoubtedly been favored not only by the greater predisposition shown by potential users but also by the planning and legislative efforts made by Spain’s public sector.

2.4.2 Studies in Africa

Several empirical studies have also been done in other African countries by different researchers on the similar or related subject; below we are going to look on some of them and their results. Nengomasha et al. (2010) on their study Electronic Government Initiatives in the Public Service of Namibia; carried out an empirical review of e-Government initiatives in Namibia’s seven ministries, two regional councils and two local authorities from February to August 2007. The study

established that Namibia is still at the initial phase of her e-government implementation strategy similar to African and other developing countries. Also the objectives are similar as per the Namibia's e-governance implementation strategy in order to improve public and democratic processes and strengthen support to public policies'. The study found that Namibia still had a slow diffusion of e-Government thus making the efforts not worthwhile.

Another study done in African country, Botswana by Nugi Nkwe (2012); E-Government: Challenges and Opportunities in Botswana; empirically examined the challenges encountered in e-government implementation, as well as the potential opportunities available in the context of Botswana society. The findings and implications of this study reveal Botswana is still lagging behind in utilizing information and communication technologies for delivering government services online.

A study by Matavire, et al (2010) on "Challenges of e-Government Project Implementation in a South African Context", empirically examined the West Cape Provincial e-Government initiatives to identify some of the factors which inhibit the successful implementation of e-Government in the Western Cape, South Africa. Members from four government offices were interviewed with a total of nine informants participating in the interviews.

The participating offices comprised two provincial offices, one local office and one office servicing both local and provincial government thereby having national scope. This study has shown that leadership, project fragmentation, and stakeholder

engagement are some of the main factors that affected the implementation of e-Government projects at a provincial level, thus making the initiatives not successful/effective.

Another study was done by Ginindza (2008) “The state of e-government in Swaziland with special reference to government ministries and departments” The research empirically assessed the state of e-government in Swaziland with special reference to government ministries and departments. The goal was to establish the extent to which the Swaziland Government has responded to the challenges and the progress made regarding the priority initiatives pertaining to e-government in the country, whereby 23 government ministries and departments were examined. The research also disclosed that the country’s e-government is still at the infancy stage of development. Thus despite the many efforts and initiatives the country is yet to meet the objectives of e-Government. In overall we can see that most of empirical studies done in Africa regarding the effectiveness of the e-Government initiatives by the governments revealed that the efforts are yet to bring the intended results to both governments and their citizens.

2.4.3 Empirical Studies in Tanzania

Also in Tanzania a limited number of similar empirical studies have been done which in a way its findings relate to our subject’s objectives. Some of them are discussed below.

Kachwamba (2011), on his study; E-Government in Marketing a Country: A Strategy for Reducing Transaction Cost of Doing Business in Tanzania, empirically

examined the role of e-government as a promotion technique in eliminating barriers to Foreign Direct Investment (FDI) inflows in Tanzania. Particularly he concentrated on barriers related to information accessibility and bureaucratic procedures facing foreign investors in acquiring relevant licenses and business permits on Tanzania Investment Centre (TIC) and Zanzibar Investment Promotion Authority (ZIPA) websites. The findings indicated that important information needs were not addressed by the information available at the website and therefore potential investors had to request additional information from the Investment Promotions Authority (IPAs) through other sources. The information not found online includes cost estimates of operating in a particular location, industry performance data and industry competitiveness.

Yonazi et al (2010) on their study, *Exploring Issues Underlying Citizen Adoption of e-Government Initiatives in Developing Countries: The Case of Tanzania*; examined low adoption, particularly by citizens, aimed at identifying issues underlying adoption of e-Government initiatives in Tanzania, a typical developing country. On this regard the low adoption indicates inadequate utilization and rejection of the initiatives by the intended users, which lead into failure of e-Government initiatives.

Using the case study approach as their strategy, they empirically investigated the adoption of e-Government on three Government organizations; National Examinations Council of Tanzania (NECTA), Tanzania Revenue Authority (TRA), and Ministry of Finance and Economic Affairs (MoFEA). The findings identified five issues impacting the adoption of e-Government in Tanzania; government preparedness, citizen preparedness, services intrinsic issues, access limitations, and

organizational context which in general implies that there is actually a low adoption of e-Government by Tanzanian citizens as a result failure to meet the intended objectives of e-Government.

Kaaya (2010) on her work *Implementing e-Government Services in East Africa: Assessing Status through Content Analysis of Government Websites*; conducted a content analysis study to determine the status of government websites of three East African countries - Kenya, Tanzania and Uganda - using establishment year, visibility and usability attributes.

For the sake of the study we will focus only in Tanzania. The study examined 37 Tanzanian websites; results on visibility test were approximately 32% average per country which reflects low adoption. In general from the few empirical studies above we can argue that there is actually a low adoption of e-Government in Tanzania as a result the benefits or intended results are not realized.

2.5 Research Gap Identified

From the analysis of both theoretical and empirical reviews there is a gap of limited studies on e-government specifically for Tanzania, whereas of the few studies none tried to directly look on the effectiveness of the e-Government initiatives. So this study is attempting to bridge the gap by assessing the effectiveness of e-Government initiatives to confirm if the government objectives have been achieved.

2.6 Theoretical Framework

The relationships which exist between variables is that changes in independent eight variables which are quality of public service delivery, work efficiency, government

information flow to citizens, cost of delivering service, resource utilization, accountability and transparency, productivity among public servants, and citizens' participation will directly impact the dependent variable (Effectiveness of E-Government).

As discussed in section 2.6 the researcher picked these eight variables based on the fact that these were the most common pre- defined goals or anticipated benefits and outcomes of public sector reforms and transformations, PSRP (2007). Also these have been picked by being the broad expectations from e-Government objectives, World Bank report (2001), Monga (2008), Mutula (2012), Gant (2008), Kaaya (2010), Njuru (2011), Ngulube (2010), and the National e-Government strategy (2012).

Therefore, the outcomes of the eight variables will determine the results of the one dependent variable. As indicted in Figure 2.1 in the conceptual framework these two types of variables are interrelated and there is no way they can be separated. Dependent variables are variables that researcher measure in order to establish the change or effect created on them. A dependent variable waits for the effect of an independent variable.

2.7 Conceptual Framework

The conceptual framework for this study consisting eight variable factors has been developed collectively from both the background to the research problem under section 1.1, theoretical and empirical reviews of literature from sections 2.3 and 2.4 respectively. The framework as illustrated in Figure 2.2 it depicts the relationships

between eight variable factors that cannot be separated since they depend on each other. These eight factors formed the basis of hypothesis formulation for the research.

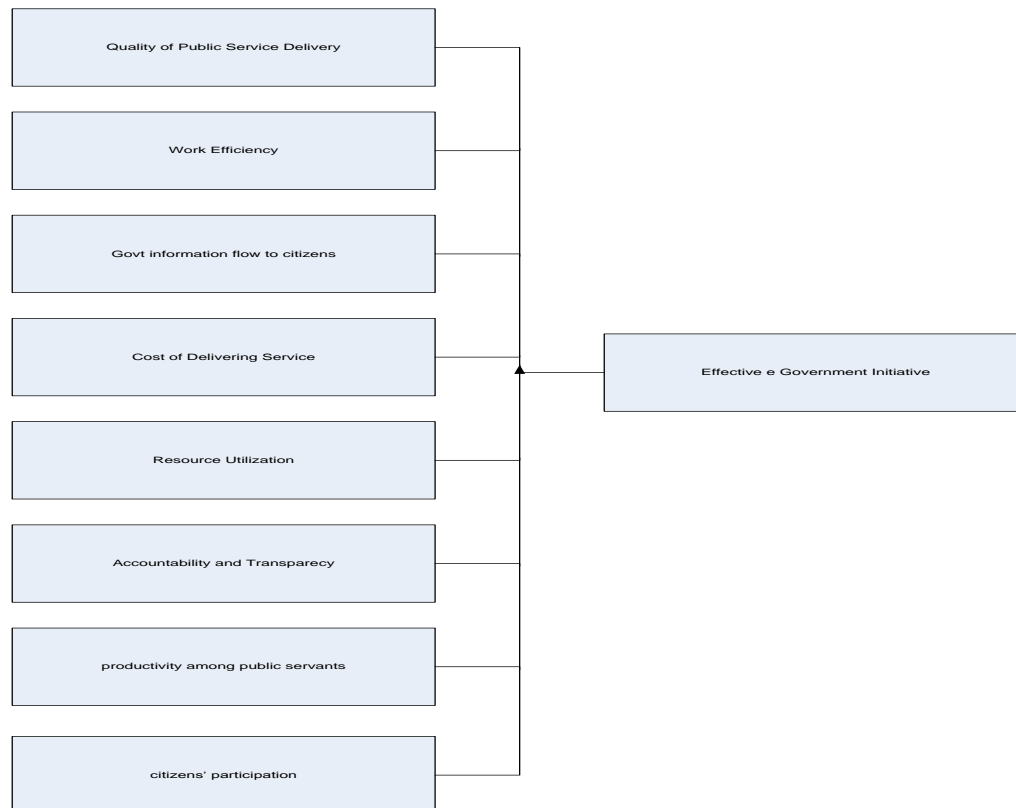


Figure 2.2: e-Government Variable Factors

Source: Field data

2.8 Statement of Hypotheses

Based on the study results from the literature review, eight variable factors have been identified as key elements to be considered when assessing the effectiveness of e-Government initiatives. These elements are: Quality of Public Service Delivery, Work Efficiency, Government information flow to citizens, Cost of Delivering Service, Resource Utilization, Accountability and Transparency, productivity among public servants, and citizens' participation. In this study any variation of the key

element has a direct impact to the overall effectiveness of the e-Government initiatives.

2.9 Summary

From the analysis of the literature review above, in general the e-government initiatives in Tanzania like in many other developing countries specifically African countries do not fully realize the intended benefits and thus reassessment of their effectiveness by this research.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Overview

This chapter provides the conceptual structure within which this research was conducted. It outlines the data collection methods used, its analysis and presentation done in the context of the defined problem. It is a very important chapter as it provides reasons to why a particular method of research, sampling, data collection and data analysis was chosen; it also gives the design of the study, population and its area of which the research based on. In short this chapter is concerned with research designs, which are the master plan specifying methods and procedures for collecting and analyzing collected data.

3.2 Research Strategies

A research design or strategy is a general plan of how the researcher will go about answering the research question(s). Research design adopted in this study is descriptive research design involving surveys and fact finding enquiries of different kinds with the aim to describe the state of affairs as it exists at present (Kothari, 2008). Case study technique has been employed on this research.

A case study entails studying a phenomenon within its real-life setting, rather than studying a phenomenon in general, a specific example within time and space is chosen for study. This allows a particular issue to be studied in depth and from a variety of perspectives (Kitchin and Nicholas, 2000). The purpose of this study together with the nature of data collected influenced the choice of this research technique.

3.2.1 Survey Population

The population of the study mainly involved key players on e – Government initiatives which includes IT staff members and public service officials at the Dar es Salaam City Council. Also DCC website has been surveyed, and its communication channels operationally tested. Some of the DCC key customers have been interviewed.

3.2.2 Area of the Research or Survey

The area of the study was the public sector; the goal was to survey all three municipals of Dar es Salaam (Ilala, Kinondoni & Temeke) plus the Dar es Salaam City Council, however due to time and resource limitations it was not be possible to cover all of them so only the DCC was covered on this study. This is an area where e-government initiatives are being planned, implemented and operated.

3.2.3 Population of the Study

The Dar es Salaam City Council has a total of 264 full time employees (FTE) and the population is distributed as shown in Tables 4.1 and 4.2.

3.3 Sampling Design and Procedures

The sampling design and procedure for this study was straight forward due to the nature of the study as it focused on e-government initiatives, so for the structured interviews the study only involved senior personnel in DCC administration including IT manager. Also the questionnaires were randomly provided to the other DCC employees as the direct users of the information and communication technologies in DCC for public service delivery or receivers of the services being offered. Unstructured interview was also conducted to the few DCC customers.

3.4 Variables and Measurements Procedures

The key information required from the survey included detailed information about the e-government initiatives within the organization, projects (in use, completed, ongoing, and abandoned), usage of ICT infrastructure, responsiveness from users, awareness levels of the users, operational status of the infrastructures etc. This information has been obtained from both IT staffs, members of administration and normal employees of the DCC plus the customers of DCC. The data collection techniques included interview schedules, questionnaires and website evaluation.

3.4.1 Methods of Data Collection

Both primary and secondary data was used, as stated earlier the data was collected by way of interviews, questionnaire, and website evaluation. Both telephone and physical visits were employed.

3.4.2 Secondary Data

The use of secondary data was employed on this study due to its advantages of having fewer resource requirements in terms of time and money. The secondary data was collected through DCC website review <http://www.dcc.go.tz/> and other government official websites including the government website <http://www.tanzania.go.tz/>, www.utumishi.go.tz, www.ega.go.tz, Also several journals, dissertations, thesis from The Open University of Tanzania, consolidated DCC reports and other published and unpublished sources were reviewed as well.

3.4.3 Primary Data

These were collected by using questionnaires, interview schedules conducted and observation performed.

3.5 Validity and Reliability

Validity refers to the accuracy or truthfulness of a measurement. A pretest was carried out to guarantee reliability of the data. This was done using 30% of the targeted sample. Based on this the corrections were made and the study carried out.

3.6 Assumptions

The assumptions made when conducting this study are that the sample selected represents the population, the instrument used were valid and that the respondents answered questions in the questionnaire truthfully.

3.7 Data Processing and Analysis

The collected data was evaluated to check for ambiguity, completeness, comprehensibility, internal consistency, relevance, and reality. Both qualitative and quantitative analytical methods were used due to the nature of data sources so as to enable the researcher to answer the research questions and meet the objective of the study from which conclusions and recommendations were drawn. Generally the analysis was based on the statement of the problem, research objective and research questions. The SPSS program was used to analyze and summarize the data.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

4.1 Overview

This chapter presents the data analysis and discussion of findings of the results obtained from the study. The data presented in this chapter was obtained from questionnaires, interviews, and observations (website survey). The results are organized into three sections according to the research questions that were raised in section 1.4 of chapter one, i.e. section 1 (4.3.1) for current situation/ status of the e government initiatives, section 2 (4.3.2) for awareness and usage of e-government and section 3 (4.3.3) for benefits of e-government initiatives. The discussion is done following the same flow of the research questions and ends up with a variable analysis of this study.

4.2 Response Rate

The survey population (questionnaires) was medium in size and the study was able to attain a 95 percent response rate, which are 71 out of 75 respondents. The return rate for the interviewee was 100% percent, that's 2 of 2 employees that were scheduled for an interview responded, while all 12 DCC customers requested for unstructured interview responded. Table 4.1 and 4.2 below shows the return rate of the people who were contacted and included in the sample. The researcher administered one type of questionnaire randomly across all departments. He also administered two types of structured interview questions; one specific for administration and another one for IT personnel, and unstructured interview to DCC customers.

Table 4.1: Frequency Distribution by Department

S/N	Department	Sample Size	Respondents
1.	Administration & Finance	28	28
2.	Construction & Fire Fighting	10	10
3.	Waste Management	7	7
4.	Urban Planning	14	14
5.	Health Services	1	7
6.	Project Management Unit (PMU)	3	5
	Total	75	71

Source: Field Data

Table 4.2: Department Percentage

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Administration & Finance	28	39.4	39.4	39.4
	Urban Planning	14	19.7	19.7	59.2
	Construction & Fire Fighting	10	14.1	14.1	73.2
	Waste Management	7	9.9	9.9	83.1
	Health Services	7	9.9	9.9	93.0
	Project Management Unit PMU	5	7.0	7.0	100.0
	Total	71	100.0	100.0	

Source: Field Data

4.3 Responses to Research Questions

4.3.1 What is the Current State of e-Government Initiatives and Usage in the Dar es Salaam City Council?

The data presented in this part is from the variables that were measured to assess the current state of e-government implementation initiatives in DCC relating to ICT projects, tools, systems, equipment, applications & services currently in place as well as the allocated budget and e-readiness.

Projects

Based on the interview responses with the IT manager, a couple of electronic technology based initiatives have been put in place by the management, some are already in operation while others are still being implemented, below table shows the major ICT related projects (e-Government initiatives) that the organization is involved in and their current status.

Table 4.3: Projects

S/N	Project	Start Date/ Year	Current status	Use	Comments
1	IFMS/ EPICOR	July 2012	Operational	Internal	Integrated Financial Management System
2	HCMIS/ Lawson		Operational	Internal	Human Capital management Information System
3	MRECOM	July 2015	Operational	External	Municipal Revenue Collection Manager
4	GMS	June 2015	Operational	Internal & External	Government Mailing System
5	CCTV	Jan 2014	Work in progress	External	Surveillance system for Dar es salaam
6	Automobile Emission Control	2014	Work in progress	External	Reduction of automobile emission from motor vehicles
7	Active Directory/ Domain Controller	2012	Faulty	Internal	A directory service for Windows domain networks which provides the centralized management and configuration of operating systems, applications, users and computers in a domain. The AD/ DC server got damaged due to power instability; no plan has been shared as to when this will be fixed.
8	Internet Connection (4MBPS)	2012	Running	External & Internal	Connects individual computer terminals, computers, mobile devices, and computer networks to the Internet, enabling users to access Internet services, such as email and the World Wide Web
9	DCC Website	2014	Running	External	Set of World Wide Web pages containing and maintaining DCC information and made available online/ on the internet for public consumption.
10	Radio & TV Station		Work in progress	External	Radio and Television broadcasting organization
11	Radio Communication System		Work in progress	Internal	Two ways Radio Frequency based communication system for security purposes.
12	PABX	2012	Faulty	Internal	A private automatic branch exchange (PABX) is an automatic telephone switching system within a private enterprise which allows and controls the sharing of different phone lines between different communication devices. This one also got damaged due to frequent power fluctuations; no plan was share as to when this will be fixed.

Source: Field Data

From Table 4.3 the implemented systems/applications have been categorized into two major categories based on the usage; internal ones are specifically for office internal employee usage while external ones are for public use.

Internal

From the interview response with IT manager, two internal systems (financial management and human capital management) have been proved to be effective and serving their main purpose. The other 4 internal systems are not performing or promptly utilized to deliver value as discussed below:

(i) IFMS/ EPICOR

EPICOR is the integrated financial management system used at the DCC, as per the interview discussion with IT manager this is one of the applications being effectively used and producing the intended results. It has automated and streamlined DCC accounting operations, financial processes and controls to support complex governmental requirements and create value through a centralized timely and accurate and consistent financial reporting thus providing overall financial visibility to management.

(ii) HCMIS/ Lawson

Lawson is the human capital management system being used at DCC for its payroll management, personnel emoluments and human resources matters. Though not all aspects of human resource management have been automated based on HCMIS capabilities e.g. absence management; employee and manager self-service; resource navigator etc., based on the interview response by IT manager the fewer available

functionalities have proven to be effective by delivering value to the organization such as appropriate and consistent employee records, provision of customized HR reports, payroll processes etc.

(iii) Government Mailing System

The corporate email system (xx@dcc.go.tz) has already been implemented and is operational. 70 users have been created and active however 96% of the users have not yet started using the service due to the lack of training. Also training budget has been approved however no time frame has been given as to when all users will start utilizing the service though monthly payments per user is already in effect. From questionnaires the respondents were asked whether there is a reliable and stable internal mailing system, in the response 77.5% of respondents disagreed (disagree + strongly disagree), while 14.1% were not sure as shown on Table 4.4.

Table 4.4: Reliable and Stable Internal Mailing System

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	31	43.7	43.7	43.7
disagree	24	33.8	33.8	77.5
not sure	10	14.1	14.1	91.5
agree	4	5.6	5.6	97.2
strongly agree	2	2.8	2.8	100.0
Total	71	100.0	100.0	

Source: Field Data

(iv) Active Directory/ Domain Controller

From the interview with the IT manager he confirmed that the Active Directory/ Domain controller has not been in operational for almost one year, and I observed that users are currently logging into their computers locally, thus not able to utilize

shared resources like file server and also from security perspective the computers are not operated in a controlled manner.

(v) Dedicated Internet connection

Based on the interview with the IT manager, he confirmed that there is a dedicated internet connection to the DCC with capacity of 4MBPS implemented through Regional Communications Infrastructure Program (RCIP) used for both internet surfing and systems connectivity; however the Internet connection is not secure as there is no firewall and no mechanism for monitoring and controlling usage thus internet connection is most of the time not stable due to some users downloading massive files which are non-work related. From time to time the system administrator needs to reboot the router in order to stabilize the internet connectivity. From the questionnaires the respondents were asked whether there is a reliable and sufficient internet connection available all the time. In response, 52% of the respondent disagreed (disagree + strongly disagree) as shown on Table 4.5.

Table 4.5: Reliable and Sufficient Internet Connection

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	4	5.6	5.6	5.6
disagree	33	46.5	46.5	52.1
not sure	7	9.9	9.9	62.0
agree	26	36.6	36.6	98.6
strongly agree	1	1.4	1.4	100.0
Total	71	100.0	100.0	

Source: Field Data

(vi) PABX

Based on the interview with the IT manager the PABX has not been in operational for two years, thus the internal telephone communication within DCC has greatly

been impacted, staffs have either to use physical means of communication or incur extra cost by using personal mobile phones.

External

From the interview response with IT manager, two external systems (Municipal Revenue Collections and the DCC Website) are in operational, while the remaining three (Automobile Emission Control, Radio & TV Station, and Radio Communication System) are still in implementation phase. The operational external systems are not adequately performing or fully utilized to deliver value as discussed below:

(i) MRECOM

MRECOM is a municipal revenue collection management system, used for managing all revenue collections. DCC main revenues includes the Ubungu bus terminal collections, Pugu Dumpsite collections, motorbike's permit, Taxi's parking permit, city car's parking and city service levy for banks. MRECOM is partly used at the Ubungu bus terminal to collect building rents only, while all other remaining collections are done manually and some through third parties then later are being consolidated into the system.

(ii) DCC Website

DCC website was separately surveyed as per appendix 3 (website survey results). The following issues were noted:

Incompleteness

After almost two years since its establishment the DCC website still has several pages which are in "work in progress" status some are basic and some are quite

important. Also some key information e.g. application forms for several permits and projects progress status are missing.

Lack of regular information updates

Also the survey on the DCC website revealed that the website contains a lot of outdated information, it seems there is no formal plan for regular information upload/ update and of the website.

No interactive functionality for website users/ citizens

The website lacks the interactive functionality where citizens/ users can make engagement with the DCC through the website, e.g. submitting certain applications, logging complaints, requesting for progress update, initiating transactions etc. Also from the questionnaires the respondents were asked whether the website is being updated frequently and contains most current information. In response, 49.3% of the respondent disagreed (disagree + strongly disagree) and 25.4% of the respondents were not sure as shown on Table 4.6.

Table 4.6: Website is being Updated Frequently and Contains Most Current Information

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	6	8.5	8.5	8.5
disagree	29	40.8	40.8	49.3
not sure	18	25.4	25.4	74.6
agree	16	22.5	22.5	97.2
strongly agree	2	2.8	2.8	100.0
Total	71	100.0	100.0	

Source: Field Data

(i) Provision of government (DCC) information through electronics means

In this regard the respondent were asked if government information is being provided through electronics means (telephone, sms, website, TV/ Radio, etc.) from their operational perspectives. In response, 54.9% of the respondents disagreed (disagree + strongly disagree) and 23.9% of the respondents were not sure as shown on 4.7.

Table 4.7: Provision of Government Information Through Electronics Means

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	24	33.8	33.8	33.8
disagree	15	21.1	21.1	54.9
not sure	17	23.9	23.9	78.9
agree	14	19.7	19.7	98.6
strongly agree	1	1.4	1.4	100.0
Total	71	100.0	100.0	

Source: Field Data

From the interviews with DCC customers (citizens), only 2 out of 12 respondents confirmed to have seen news/ information regarding DCC, one from the DCC website and both two from TV news. The remaining 83% of the respondents said they have never seen DCC information being provided through electronic means whether through TV or radio broadcasting, also they were not aware of DCC website availability probably due to lack of internet access and/ or knowledge of internet usage.

(ii) Online transactions for general public

Regarding online transaction availability, the respondents were asked whether there are online transactions available for public (e.g. online applications, online

payments, M-pesa payments for DCC services etc.). In response, 63.4% of the respondents disagreed (disagree + strongly disagree) as shown on Table 4.8.

Table 4.8: Online Transactions for General Public

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	33	46.5	46.5	46.5
disagree	12	16.9	16.9	63.4
not sure	16	22.5	22.5	85.9
agree	10	14.1	14.1	100.0
Total	71	100.0	100.0	

Source: Field Data

ICT/ Electronic Communication Equipment

Also several ICT/ electronic based equipment have been implemented by the DCC as part of e-government initiatives; table 4.9 shows the equipment's type and their status.

Table 4.9: Available ICT Facilities Status

S/N	Equipment	Total Number	In Operational	Faulty
1.	Telephones	80	10	70
2.	Fax Machines	1	1	0
3.	Desktop Computers	72	57	15
4.	Laptops	21	19	2
5.	Servers	6	1	5
6.	Printers	45	35	10
7.	Scanners	10	9	1
8.	Photocopiers	15	11	4
9.	Mobile Phones	2	2	0

Source: Field data

(i) Telephones

Based on Table 4.9 as provided by the IT manager during the interview it shows that 87.5% of the telephone sets are not in operational. Also from questionnaires the respondents were asked if telephone and fax lines are working and in operational all the time. In response, 84.5% of the respondent disagreed (disagree + strongly disagree) as shown on Table 4.10.

Table 4.10: Telephone & Fax Lines are Working and in Operational

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	15	21.1	21.1	21.1
disagree	45	63.4	63.4	84.5
not sure	4	5.6	5.6	90.1
agree	7	9.9	9.9	100.0
Total	71	100.0	100.0	

Source: Field Data

(ii) Office Computers

From the interview discussion with IT manager 20.8% of the desktop computers are faulty as shown on Table 4.9. Based on questionnaire responses regarding the condition and status of office computers, 47.9% of the respondents disagreed (disagree + strongly disagree) with the question if all office computers are working and in good conditions as per Table 4.11.

Table 4.11: Computers are Working and in Good Condition

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	6	8.5	8.5	8.5
disagree	28	39.4	39.4	47.9
not sure	8	11.3	11.3	59.2
agree	27	38.0	38.0	97.2
strongly agree	2	2.8	2.8	100.0
Total	71	100.0	100.0	

Source: Field data

(iii) Servers

From the interview with the IT manager it was revealed that 83% of the DCC servers are not in operational as per Table 4.9. These include the AD/ DC servers, file server and other application servers. No time frame was given for the restoration of the faulty servers and the services running on them.

(iv) Printers & Photocopiers

From the interview response with the IT manager, 22.2% of the printers and 26.7% of the Photocopiers are not in operational as shown on the Table 4.9. From the questionnaires the respondents were asked whether there are sufficient imaging services with all devices in operational all the time. In response, 54.9% of the respondent disagreed (disagree +strongly disagree) as shown on Table 4.12.

Table 4.12: Sufficient Imaging Services with all Devices in Operational Printers Copiers and Scanners

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	7	9.9	9.9	9.9
disagree	32	45.1	45.1	54.9
not sure	5	7.0	7.0	62.0
agree	26	36.6	36.6	98.6
strongly agree	1	1.4	1.4	100.0
Total	71	100.0	100.0	

Source: Field Data

(v) Overall ICT systems, tools and applications

The respondent to the study questionnaire were asked if all ICT systems, tools, and applications implemented in their individual departments are in operational and

stable. In response, 56.3% of the respondent disagreed (disagree +strongly disagree) as shown on Table 4.13.

Table 4.13: ICT Systems, Tools and Applications Implemented

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	5	7.0	7.0	7.0
disagree	35	49.3	49.3	56.3
not sure	10	14.1	14.1	70.4
agree	21	29.6	29.6	100.0
Total	71	100.0	100.0	

Source: Field Data

(vi) Budget

From the interview with the IT manager it was noted that the ICT budget being catered for is insufficient to support the existing ICT infrastructure and implementing the new ones.

4.3.2 What is an Overall Awareness of Usage and Application of e-Government Tools by Public Servants and Customers of DCC?

The data presented in this part is from the variables that were measured to assess the overall awareness of usage and application of e-government systems by public servants and customers of the DCC.

(vii) Individual computer usage

Regarding the use of computer at individual level, 67.6% of the respondents agreed (agree + strongly agree) with the question if they use computers for more than 50% of their tasks as shown on Table 4.14.

Table 4.14: Use Computer for More than 50% of the Tasks

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	5	7.0	7.0	7.0
disagree	16	22.5	22.5	29.6
not sure	2	2.8	2.8	32.4
agree	38	53.5	53.5	85.9
strongly agree	10	14.1	14.1	100.0
Total	71	100.0	100.0	

Source: Field Data

(viii) Departmental computer usage

However when the respondent were asked at the departmental level if all staff in their departments can use computers to perform their day to day activities, 56.3% of the respondents disagreed (disagree + strongly disagree) as shown on Table 4.15.

Table 4.15: All Staff in the Department can use Computer

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	10	14.1	14.1	14.1
disagree	30	42.3	42.3	56.3
not sure	7	9.9	9.9	66.2
agree	18	25.4	25.4	91.5
strongly agree	6	8.5	8.5	100.0
Total	71	100.0	100.0	

Source: Field Data

(ix) DCC e-mail usage

Regarding the use of office e-mail (xx@dcc.go.tz) respondents were asked if they do use office email system in official communications both internal and external. In response, 76.1% disagreed (disagree + strongly disagree) as shown on Table 4.16.

Table 4.16: Use of Office Email in Official Communication

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	31	43.7	43.7	43.7
disagree	23	32.4	32.4	76.1
not sure	2	2.8	2.8	78.9
agree	14	19.7	19.7	98.6
strongly agree	1	1.4	1.4	100.0
Total	71	100.0	100.0	

Source: Field Data

Based on the interview with the DCC customers, all 12 respondents were not aware of the existence of DCC email (cd@dcc.go.tz) and never interacted with the organization through email communication.

(x) Incoming/ Outgoing official communications

Also in general the use of office email system, telephone and fax in official communication (both incoming and outgoing) was looked at in questionnaires. In response, 63.4% of the respondent disagreed (disagree + strongly disagree) as shown on table 4.17.

Table 4.17: Official Communication are Through Office E-mail System, Telephone and Fax

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	10	14.1	14.1	14.1
disagree	35	49.3	49.3	63.4
not sure	7	9.9	9.9	73.2
agree	16	22.5	22.5	95.8
strongly agree	3	4.2	4.2	100.0
Total	71	100.0	100.0	

Source: Field Data

(xi) Training

Regarding electronic communication training (awareness/ workshop program) to the internal users, respondents were asked whether they have attended any such a program in the past 12 months. In response, 83.1% of the respondent disagreed (disagree + strongly disagree) as shown on Table 4.18.

Table 4.18: Attended Awareness Workshop on ICT in the Last 12 Months

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	40	56.3	56.3	56.3
disagree	19	26.8	26.8	83.1
not sure	6	8.5	8.5	91.5
agree	3	4.2	4.2	95.8
strongly agree	3	4.2	4.2	100.0
Total	71	100.0	100.0	

Source: Field Data

(xii) Awareness programs to citizens

The respondent to the study questionnaire were asked whether they do provide awareness programs to their public clients on how to make use of technology to access government (DCC) services. In response, 64.8% of the respondents disagreed (disagree + strongly disagree) and 23.9% of the respondents were not sure, as shown in Table 4.19.

Table 4.19: Awareness Programs to Citizens on how to use and Access Government Information Through Electronic Means

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	33	46.5	46.5	46.5
disagree	13	18.3	18.3	64.8
not sure	17	23.9	23.9	88.7
agree	7	9.9	9.9	98.6
strongly agree	1	1.4	1.4	100.0
Total	71	100.0	100.0	

Source: Field Data

Of the 12 DCC customers approached for the interview, none had received a formal communication/ awareness information from DCC officials regarding the existence of the DCC electronic based means of communications including email address and website.

(xiii) Rate of utilization of e-government by citizens

Based on questionnaire responses regarding the utilization rate of e-government initiatives, 59.2% of the respondents disagreed (disagree + strongly disagree) while 32.4% were not sure as per Table 4.20.

Table 4.20: High Rate of Utilization of E-Government Initiatives by Citizens

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	14	19.7	19.7	19.7
	disagree	28	39.4	39.4	59.2
	not sure	23	32.4	32.4	91.5
	agree	6	8.5	8.5	100.0
	Total	71	100.0	100.0	

Source: Field Data

Based on the interview with DCC customers, out of 12 respondents none has ever used email to interact with DCC, 2 have tried to use the DCC website but they were not able to get the information they needed, 7 of the respondents have on different occasions interacted with DCC officials using telephone however on most cases were successful by calling the officials through their personal mobile phones and not official DCC lines.

4.3.3 To what Extent do the Benefits of e-Government have been Realized with Respect to the Expected Benefits at the DCC?

4.3.3.1 Reduced Daily Work Load

From questionnaires, respondents were asked whether the use of electronic devices have reduced their daily workload. In their responses, 62% of the respondents agreed (agree + strongly agree) as shown on Table 4.21.

Table 4.21: Electronic Communication Devices has Reduced the Daily Work Load

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	6	8.5	8.5	8.5
	disagree	17	23.9	23.9	32.4
	not sure	4	5.6	5.6	38.0
	agree	37	52.1	52.1	90.1
	strongly agree	7	9.9	9.9	100.0
	Total	71	100.0	100.0	

Source: Field Data

4.3.3.2 Improved Turnaround Time (TAT)

Based on questionnaire responses regarding the improved turnaround time (TAT) due to the use of electronic communication devices in serving customers, 55% of the respondents agreed (agree + strongly agree) while 14.1% were not sure as shown on Table 4.22.

Table 4.22: Use of Electronic Communication Devices has Reduced the Turnaround Time in Serving/ Responding to Customers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	6	8.5	8.5	8.5
	disagree	16	22.5	22.5	31.0
	not sure	10	14.1	14.1	45.1
	agree	32	45.1	45.1	90.1
	strongly agree	7	9.9	9.9	100.0
	Total	71	100.0	100.0	

Source: Field Data

4.3.3.3 Improved Overall Team's Performance and Efficiency

Regarding the overall team's performance, respondents were asked in questionnaires if the use of electronic communication devices has improved the overall performance and efficiency of the team. In response, 56.3% disagreed (disagree + strongly disagree) as shown on Table 4.23.

Table 4.23: Use of Electronic Communication Devices has Improved Overall Performance and Efficiency of the Team

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	6	8.5	8.5	8.5
disagree	34	47.9	47.9	56.3
not sure	14	19.7	19.7	76.1
agree	16	22.5	22.5	98.6
strongly agree	1	1.4	1.4	100.0
Total	71	100.0	100.0	

Source: Field Data

From the interview with DCC customers, the 12 respondents were asked to rate the performance of the team dealing with Taxi's parking and motorbike's permit provision, 9 of the respondents were still not happy with the performance.

4.3.3.4 Reduced Number of Complaints

From questionnaires, respondents were asked if the use of electronic devices/channel have reduced the number of complaints from customers in their areas. In their responses, 64.8% of the respondents disagreed (disagree + strongly disagree) and 22.5% of the respondents were not sure as shown Table 4.24.

Table 4.24: Use of Electronic Communication Devices has Reduced the Number of Complaints in the Department

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	6	8.5	8.5	8.5
disagree	40	56.3	56.3	64.8
not sure	16	22.5	22.5	87.3
agree	9	12.7	12.7	100.0
Total	71	100.0	100.0	

Source: Field Data

4.3.3.5 Reduced Manual Processes

Questionnaire respondents were asked if the use of electronic communication devices have reduced the number of manual processes in their areas. In their responses, 64.8% of the respondents disagreed (disagree + strongly disagree) as shown on Table 4.25.

Table 4.25: Use of Electronic Communication Devices has Reduced the Number of Manual Processes in the Department

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	5	7.0	7.0	7.0
disagree	41	57.7	57.7	64.8
not sure	10	14.1	14.1	78.9
agree	14	19.7	19.7	98.6
strongly agree	1	1.4	1.4	100.0
Total	71	100.0	100.0	

Source: Field Data

4.3.3.6 Reduced Redundant Staff

The respondent to the study questionnaire were asked if the use of electronic communication devices has reduced the number of redundant staff from their areas. In their responses, 64.8% of the respondents disagreed (disagree + strongly disagree) as shown on Table 4.26.

Table 4.26: Use of Electronic Communication has Reduced a Number of Redundant Staff in the Department

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	12	16.9	16.9	16.9
disagree	34	47.9	47.9	64.8
not sure	23	32.4	32.4	97.2
agree	2	2.8	2.8	100.0
Total	71	100.0	100.0	

Source: Field Data

4.3.3.7 Increased Rate of Customer/ Citizen Interactions

In this regard, respondents through questionnaires were asked if the use of electronic communication devices has increased the rate of customers/ citizens interactions with the government (DCC). In their responses, 57.7% of the respondents disagreed (disagree + strongly disagree) as shown on Table 4.27.

Table 4.27: Use of Electronic Communication has Increased the Rate of Customer/ Citizen Interaction

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	2	2.8	2.8	2.8
disagree	39	54.9	54.9	57.7
not sure	18	25.4	25.4	83.1
agree	12	16.9	16.9	100.0
Total	71	100.0	100.0	

Source: Field Data

4.3.3.8 Reduced Bureaucratic Transactional Processes and Lack of Transparency

Based on the interview with several DCC customers (citizens), 12 respondents were asked to confirm their experience with DCC processes for the past few years whether there has been improvements on the bureaucratic transactional processes and lack of

transparency, again 9 respondents said that there has been very little improvement on some areas where as in other areas things are just the same.

Regarding the same issue, the respondents from questionnaires were asked if the use of electronic communication devices has reduced the bureaucratic transactional processes and lack of transparency in their areas. In their responses, 62% of the respondents disagreed (disagree + strongly disagree) as shown on the Table 4.28.

Table 4.28: Use of Electronic Communication has Reduced Bureaucracy and Lack of Transparency in the Department

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	8	11.3	11.3	11.3
disagree	36	50.7	50.7	62.0
not sure	17	23.9	23.9	85.9
agree	9	12.7	12.7	98.6
strongly agree	1	1.4	1.4	100.0
Total	71	100.0	100.0	

Source: Field Data

4.4 Variables Analysis for this Study

On this part the above results are discussed with reference to the conceptual framework for this study based on the eight factors forming the independent variables which directly impacts the depend variable (effectiveness of e-government).

4.4.1 Quality of Public Service Delivery

From the above results the overall quality of public service delivery at the DCC is not yet up to the satisfactory level as we have seen on the survey respondents

regarding DCC website, operational, usage and stability state of the DCC electronic communication systems, devices and tools, and also response on the complaints.

4.4.2 Work Efficiency

Regarding work efficiency, the results shows positive responses at individual level, where most of the respondents confirmed that their work load has diminished and the turnaround time to serve customers improved. However that wasn't the case at team's (departmental) level, where respondents disagreed that the electronic communication has improved the overall team's performance. Again response from interview with DCC customers' majority confirmed that performance and efficiency have not improved.

4.4.3 Government Information Flow to Citizens

Based on the above results, the government (DCC) information flow to the citizens/general public using electronic communications means hasn't been successful. Most respondents to this study disagreed to the question whether government information is being provided to the public through the use electronic communication.

4.4.4 Cost of Delivering Service

The study was not able to establish the overall running cost for DCC operations due to lack of transparency, however based on the initial cost incurred by DCC in implementing the electronic communication systems, tools and equipment while some of them are not being utilized fully and others are out of operation for long time there is an indirect cost which DCC is incurring by not getting the value from the investments.

4.4.5 Resource Utilization

From the above results it's evident that electronic communication resources are not fully utilized specifically on systems and ICT tools already implemented at DCC as 83% of the servers are not in operation and 96% of registered and active email users are not using the service. This also applies to DCC website which is still incomplete and missing several key information and updates and 87.5% of telephones are out of order.

4.4.6 Accountability and Transparency

Accountability and transparency can be exercised by being open to the public/ citizens on the roles and responsibilities regarding DCC activities impacting the public/ citizens, providing regular updates on progress status on such activities and also being clear on processes for all services being offered by DCC. However from the DCC website review we have seen that there has been no update on what's going on in DCC. Information regarding 80% of the major DCC project is not available to the public. Recent news and latest events regarding DCC were posted 5 and 6 months ago. Also from the questionnaires results above it has been noted that provision of government (DCC) information to the public through electronic means is not being done.

4.4.7 Productivity Among Public Servants

Based on the above results it has been noted that productivity at individual level has been improved to several employees due to the use of electronic communication equipment on performing their daily activities where 62% of the respondents agreed that they have experienced a reduced workload and 55% confirmed to have

experienced improved TAT in serving their customers. However based on the results the study revealed that this is not the case at the team's (departmental) level where 56.3% of the respondents disagreed to the question whether the use of electronic communication devices has actually improved their overall team's performance and efficiency.

4.4.8 Citizens' Participation

The study was not able to fully review the level of citizen's participations in DCC initiatives/ projects concerning the public.

However based on the questionnaires respondents on the question regarding customer/ citizen interaction with public servants where 57.7% of the respondents disagreed, it is most likely in overall the level of citizens participation to the public initiatives is not sufficient, this is in addition to the fact that the flow of information to the citizens/ public is also not smooth as we have seen.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The general objective of this study was to assess the effectiveness of e-government initiatives already implemented in public administration, focus being on the Dar es Salaam City Council (DCC). In this chapter, a summary of the findings of the study are made, followed by the conclusions and recommendations.

5.2 Summary of Findings

This research has established that DCC has implemented several e-government initiatives including systems, applications, tools and equipment as shown on Tables 4.3 and 4.9 for the purpose of enhancing delivery of public service, improving information flow to the citizens, promote productivity and encourage citizens participation. However based on the overall study results there is still a gap towards achieving the intended end results of those initiatives. Below are the summary of the key findings on the study in relation to the research questions.

5.2.1 Current State of e-Government Initiatives Implementation and Usage in DCC

The study revealed that several systems and applications have been put in place in DCC including government mailing system, revenue collection system, financial management system, human capital management system, intercom system, active directory & domain controller, internet connection etc. Also several electronic

communications tools and equipment are in place like servers, desktops, laptops, printers, photocopiers, scanners, fax and telephone sets.

However the study revealed that several of the systems, applications, tools and equipment are not being fully utilized or are completely not in operation. E.g. 96% of registered email users are not using the mailing system and 77.5 % of the respondents on questionnaires disagreed that there is a reliable and stable internal mailing system. Also Active Directory/ Domain controller has not been in operational for almost one year, and all DCC users are currently logging into their computers locally.

The intercom system (PABX) also is not operational for two years, 87.5% of the telephone sets are out of service, 20.8% of the desktop computers are faulty, and 83% of the DCC servers are not in operational. Also 22.2% of the printers and 26.7% of the Photocopiers are not in operational. Thus in response, 56.3% of the respondent disagreed to the question whether all ICT systems, tools, and applications implemented in their individual departments are operational and stable.

5.2.2 Overall Awareness of Usage and Application of E-Government Systems by Public Servants

The study found that the rate of computer usage at individual level to perform daily activities is high, where 67.6% of the respondents agreed with the question if they use computers for more than 50% of their tasks. However regarding computer usage at departmental level the study found that not all staff at departmental level is able to use computers to perform their day to day activities, 56.3% of the respondents

disagreed to the question if all staff in their departments can use computers. The study also found that the rate of electronic communication systems/ equipment (email, telephone, fax, Intranet) usage for normal office activities is generally low for both DCC employees and also for citizens when interacting with DCC.

As discussed already 96% of registered email users are not using the mailing system, also 76.1% of the respondents to the questionnaires disagreed to the question if they are using the office email (xx@dcc.go.tz) for official communications both internally and externally. Also 63.4% of the respondent disagreed to the question whether they use electronic communication means (email, telephone, fax, Internet, TV & Radio) on their official communications. The study disclosed that there is serious lack of training/ awareness programs regarding use of electronic communication systems and equipment/ tools to internal DCC users and the general public/ citizens. 83.1% of the respondent did not attend any training/ awareness program for the past 12 months. Also 64.8% of the respondents disagreed to the question whether there has been awareness programs provided to their clients (citizens) on how to make use of technology to access government (DCC) services. It has also been noted on the study that there is a significant number of respondent to the questionnaires who knows nothing about several e-government initiatives in DCC, on average across all respondents there were 15.7% of the responses marked “Not Sure”.

5.2.3 Benefits of e-Government Realized at DCC

The study revealed that there are some benefits which have been realized as a result of electronic communications systems, tools and equipment implemented at DCC mainly at individual level. 62% of the respondents agreed that the use of electronic

communication equipment has reduced their overall daily workload, while 55% of the respondents agreed to have improved their turnaround time (TAT) in serving customers due to the use of electronic communication devices.

However that was not the case at the team (departmental) level where 56.3% of the respondents disagree that their team's performance has improved as a result of use of electronic communication devices, also 64.8% of the respondents disagreed to the question whether the use of electronic communication in their areas has minimized number of complaints. 64.8% of the respondents said that manual processes have not been reduced as a result of electronic communication usage in their areas. Again 64.8% of the respondents disagreed to the question that the use of electronic communication reduced the number of redundant staff in their areas.

The study revealed that there was no significant increased rate of citizens' interaction with the government (DCC) as a result of electronic communication implementation, 57.7% of the respondents disagreed that there was such an increase.

5.3 Conclusion

In conclusion, the study achieved its main objective of assessing the effectiveness of e-government initiatives already implemented in public administration, focus being on Dar es Salaam City Council (DCC). The key areas examined on the study were the current situation/ status of e-government initiatives, awareness and usage of e-government, and benefits realized from the e-government initiatives. The identified gaps from the examination have been highlighted under section 5.2 summary of findings where in overall the expected end results of most of the initiatives implemented at DCC have significantly not been met.

5.4 Recommendations

The recommendations listed below are based on the study findings, and the researcher's view is that these may assist in fixing the identified gaps and ensuring effective implementation of e- government initiatives at DCC and elsewhere.

- (i) Establish and implement an effective and continuous training/ awareness program to DCC users regarding electronic communication system, automated systems and equipment usage. This should include the overall awareness of e- government benefits to senior management and the general staff.
- (ii) Ensure that user training becomes part and parcel of project implementation; whenever new system is being implanted user training must take place and sustainability strategies be thought during the implementation phase to ensure the system is utilized immediately after rollout and sustained over years.
- (iii) Establish and implement an incident and problem management process where faulty equipment, user challenges and other system incidents will be systematically be reported, investigated and tracked for resolution including provision of regular management reporting.
- (iv) Under project management, establish a post implementation review process where after certain period of time an overall review of the project is being conducted to find out whether the implemented project does serve the intended purpose/ intended benefits are being realized or not, and take immediate corrective measures in case of any discrepancies to the intended goals.
- (v) Enhance the overall management of the DCC website by assigning accountability and responsibilities to a resource (internal/ external) responsible

for the website finalization and regular update of the content. There should also be a regular independent monitoring of the content and availability.

5.5 Areas for Further Research

The researcher wishes to call upon further researches on the following areas:

- (i) An assessment of effectiveness on e-government implementation initiatives in individual City Council Authorities (CCAs) in Dar es Salaam.
- (ii) An assessment of effectiveness on e-government implementation initiatives on government ministries, departments and agencies (MDA's).
- (iii) Further assessment of effectiveness on specific e-government independent variables including; accountability & transparency, government information flow to the citizens, cost of delivering service, productivity among public servants etc.

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APPENDICES

Appendix 1: Questionnaires

Research Questionnaire on the Effectiveness of E-Government Initiatives in Public Administration: Critical Look at Dar es Salaam City Council

This questionnaire is for academic purpose only, it is meant to find information regarding e-government initiatives in public sector, DCC being the case study. Kindly fill it and return to the researcher. Any information provided will remain confidential and be used for academic reasons only.

Instructions

Mark with symbol \surd against the provided options that exactly or closely represent your answer. For the multiple choice questions just circle the correct option. If you have any comment on any question you are allowed to write in any space and indicate the question or section number.

Personal information

Name: (optional) _____ Mob Phone: (optional) _____

Email Address: (optional) _____ Department: (required) _____

Gender: (required) ☐ Male ☐ Female

How long have you been working with DCC (yrs.): ☐ 0 to 5 ☐ 6 to 10 ☐ 11 to 20 ☐

21 +

Section A: current situation/ status of the e-government initiatives

	<i>What is the current state of e-government implementation initiatives in the Dar es Salaam City Council?</i>	Strongly disagree	disagree	Not sure	agree	Strongly agree
1	All office computers are working and in good conditions					
2	All telephone and fax lines are working and in operational all the time					
3	There is a reliable and sufficient internet connection available all the time					
4	There is a reliable and stable internal mailing system available all the time.					
5	We have sufficient imaging services with all devices in operational all the time [i.e. printers/ copiers/ scanners]					
6	We have a stable and updated office website accessible all the time from anywhere					
7	Provision of government information through electronic means					
8	We are offering online transactional for the general public.					
9	All ICT systems, tools and applications implemented in my department are in operation and					

	stable.					
10	Your clients interacts with you through the use of ICT					

Section B: awareness and usage of e-government

	<i>What is an overall awareness of usage and application of e-government tools by public servants and customers of the Dar es Salaam City Council?</i>	Strongly disagree	disagree	Not sure	agree	Strongly agree
10	I use computer for more than 50% of my tasks					
11	I use office email system in official communications both internal or external					
12	Most of the official communications [both incoming and outgoing] are through office email system, telephone and fax					
13	Our website is being updated frequently and contains most current information					
14	In the last 12 months I have attended at least one awareness/ workshop program on electronic communication.					
15	TV & Radio are sufficiently used to share official information to the citizens					
16	All staff in my department can use computers for performing their day					

	to day activities.					
17	We have sufficient skilled resources to support electronic based infrastructure					
18	We do provide government information to citizens through electronic means					
19	There has been awareness programs to citizens on how to make use of technology to access government service,					
20	The rate of utilization of e-government initiatives by citizens is high.					

Section C: benefits of e-government initiative

	<i>To what extent do the benefits of e-government have been realized with respect to the expected benefits at the Dar es Salaam City Council?</i>	Strongly disagree	disagree	Not sure	agree	Strongly agree
21	The use of electronic communication devices has reduced my daily work load					
22	The use of electronic communication devices has improved my turn around time [TAT] in serving/ responding to customer issues.					

23	The use of electronic communication devices has improved overall performance and efficiency of my team					
24	The use of electronic communication devices has reduced number of complaints in my area					
25	The use of electronic devices has reduced the number of manual processes in my area					
26	The use of electronic communication devices has reduced the number of physical letters [both incoming and outgoing]					
27	The use of electronic communication devices has reduced the number of redundant staff in my area					
28	The use of electronic communication devices has increased the rate of customer/ citizen interaction					
29	The use of electronic communication devices has increased the rate of customer/ citizen interaction					
30	The use of electronic communication devices has reduced the bureaucratic					

	transactional processes and lack of transparency					
--	--	--	--	--	--	--

Section D: Your personal view [circle the correct answer]

31. From your view point what's the overall status of e-government in your organization?
a. Very Good b. Good c. Fair d. Poor
32. How often do you use electronic devices in accomplishing your day to day activities?
a. Regularly b. Sometimes c. Rarely d. Never
33. Are you aware of all the services offered by your organization through electronics means?
a. Yes b. No
34. Are e-Government online services effective in providing the Government information to the people?
a. Yes b. No
35. What system/ applications/ on line services or tools are available in your department?
i. _____ ii. _____ iii. _____ iv. _____ v. _____

Thank you for participating on this research, please return the questionnaire to the following address:

E-mail: luscoweb@gmail.com

Mob: 0767210553

P.O Box 8332

Appendix 2: Interview Schedule

(i) IT Manager

IT Interview Questions on the Effectiveness of E-Government Initiatives in Public Administration: Critical Look at Dar es Salaam City Council

1. What is the role of IT in the organization?
2. What is the high level IT leadership organization structure? Number of IT FTE?
3. As an organization, do you have an e-government adoption strategy?
 - a. Yes b. No
4. If yes (7), how much has it been implemented so far?
5. As an organization, do you have ICT policy/ standards?
 - (a) List them
6. In the past 3-5 years, what are the major ICT projects the organization involved in and their current status;

S/N	Project	Start Date/ Year	Current Status	Comments
1				
2				
3				

7. What ICT tools/systems/ applications/ services are currently in use within the organization; (Is ICT asset register in place?)

S/N	Tool	Total Number	In Operational	Comments
1	Telephone lines			
2	Fax lines			
3	Desktop Computers			

4	Laptops			
5	Servers			
6	Printers			
7	Scanners			
8	Photocopiers			
9	Mobile phone lines			
10	Digital Senders			

8. What ICT systems/ applications/ services are currently in use within the organization;

- (i) CCTV System
- (ii) Radio Communication system
- (iii) Radio & TV Station
- (iv) Dedicated internet connection (capacity?)
- (v) Corporate e-mail system
- (vi) Corporate website
- (vii) Corporate Intranet
- (viii) MS Office suite
- (ix) Transactional/ payments applications (for both incoming and outgoing)
- (x) Employee management application
- (xi) Record management system (Archiving)
- (xii) Others_____

9. In overall, how does ICT plays a role in the engagement between the organization and the public (citizens, businesses, govt agencies)?

10. What is the status of e-readiness of the overall organization?
 - (i) Users
 - (ii) Management buy-in and support
 - (iii) Budget
11. Are there any awareness/ encouraging programs to users/ citizens on how to make use of technology to access government services
12. Is there harmonization of ICT adoption between departments within the organization?
13. How frequently does the corporate website is being updated with current information?

ii. Management

Management Interview Questions on the Effectiveness of E-Government Initiatives in Public Administration: Critical Look at Dar es Salaam City Council

1. What is/ are the main role/s of your organization?
2. What organs (and roles) constitutes the Dares salaam City Council (the structure)
 - ✓ List them down
3. How many departments (and roles) are there in the DCC?
 - (i) List them down
4. High level leadership organization structure
5. What is the number of full time employees (FTE) for the whole organization?
6. Who are your key/ frequent clients/ customers?
 - (i) Government agencies

(ii) List them down

(iii) Businesses

(iv) List them down

(v) Citizens

(vi) List them down

7. What are your key services being offered to public

(i) List them down

8. As an organization, do you have an e-government adoption strategy?

a. Yes b. No

9. If yes (7), how much (in %) has it been implemented so far?

10. As an organization, do you normally have a budget for ICT/ E-government initiatives? At what % of the total organization budget?

Appendix 3: DCC Website Survey Results

1.0 DCC Website Survey

Survey on the DCC website (www.DCC.go.tz) fig 1.1, revealed that the website was established in 2014 as shown in fig 1.2 below. Government websites are considered as part of e-government initiatives, thus also provides an overview of the overall initiatives for e-government status.



Figure 1.1 DCC Website Homew Page

Source: Field Data (2015)

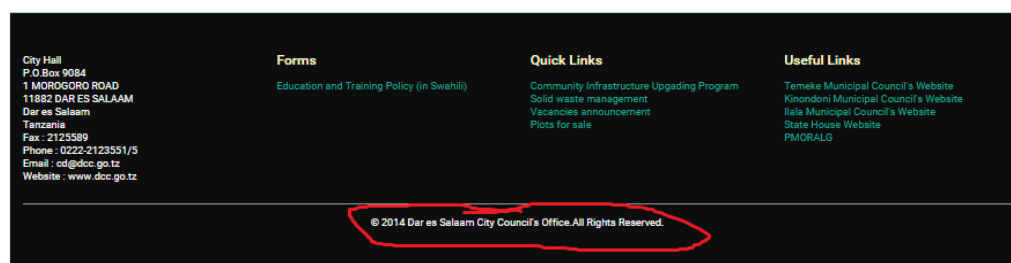


Figure 1.2 DCC website Establishment Year

Source: Field Data (2015)

During the DCC website survey, the following gaps were noted which confirms the ineffectiveness of the initiative;

i. After almost two years since the website has been established it is still incomplete; where several parts/ pages of the website as per the original design are still under construction (work in progress status) as shown below while others lacks the expected information;

Fig 1.3 below was supposed to provide an overview of the of the DCC organizational structure by displaying the departments/ functions which defines how activities such as task allocation, coordination and supervision are directed towards achievements of the organizational aims. Thus it determines the modes in which the organization operates and performs – transparency. Unfortunately this information is not available as the page says work in progress.

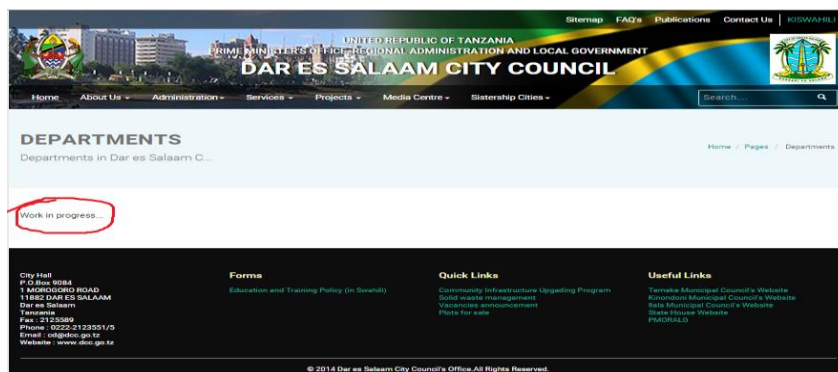


Fig 1.3 DCC Departments

Source: Field Data (2015)

Fig 1.4 is a page which was supposed to provide information regarding one of the major DCC projects; Soloid WasteManagement project – Pugu Dumpsite. Unavailability of this information has hindered the information flow to citizens regarding progress status of the project which have direct impact to their lives, also blocked the possibility of citizens participation into the project due to lack on detailed information on the prject.



Fig 1.4 Pugu Dumpsite

Source: Field Data (2015)

Fig 1.4 again is a page which was supposed to provide information regarding another major project being undertaken by DCC; City Business Park. Lack of such information shows that transparency to the public has not been achieved, information flow to the citizens has been hindered, and citizens participation obstructed.



Fig 1.5 City Business Park

Source: Field Data (2015)

Fig 1.6 this page was supposed to provide information regarding partnership between Dar es salaam and Hamburg cities, however the page is still under construction.



Fig 1.6 Sister Partnership

Source: Field Data (2015)

Fig 1.7 is a page about frequently asked questions (FAQs) which are listed commonly asked questions and their corresponding answers pertaining to a particular service, from operational point of view FAQs reduce the amount of routine daily enquiries submitted at the organization thus leaving staff to get sufficient time to do other important things – efficiency. However the intended information under this page is not available.

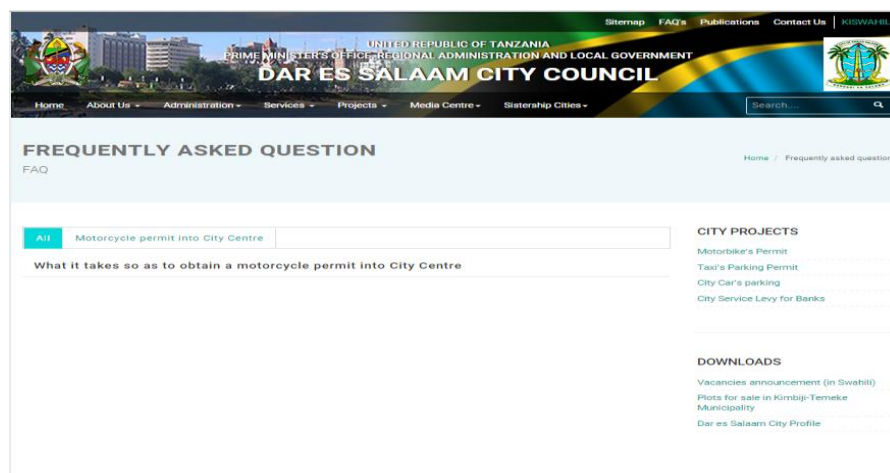


Fig 1.7 Frequently asked Questions (FAQs)

Source: Field Data (2015)

Fig 1.8 shows a page for city director biography page, unfortunately the biography for city director is not in place, however the biography for the Lord mayor is available which shows inconsistency in information sharing, and lack of transparency.

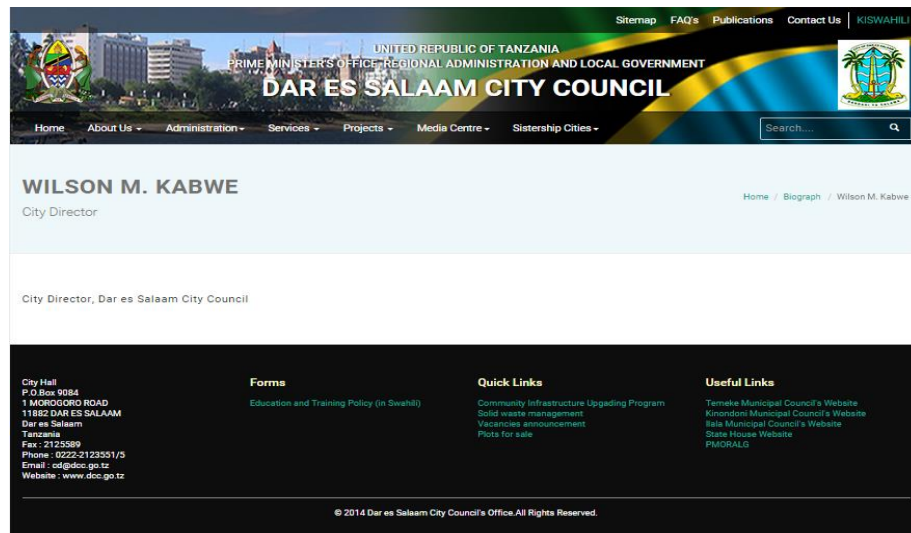


Fig 1.8 City Director Biography

Source: Field Data (2015)

Fig 1.9 lists number of services being offered by DCC to the public under Services drop down menu (Motorbike's Permit, Taxi's Parking Permit, City Car's Parking and City Service Levy for Banks). However all four links to the detailed service information cn not be opened which means such information is not yet available in the website.



Fig 1.9 Services

Source: Field Data (2015)

Fig 1.10 lists major DCC projects under project drop down menu currently being undertaken, of the six projects listed 5 links to the detailed project information can not be opened. Thus information regarding 80% of the major DCC project is not available to the public as a result the e-government goals such as transparency and information flow to citizens have not been achieved.



Fig 1.10 Projects

Source: Field Data (2015)

Fig 1.11 lists media centre information under drop down menu including Reports, City BY Laws, Press Release, Speeches and Photo & Video Gallery. Unfortunately none of these key information links can be opened.

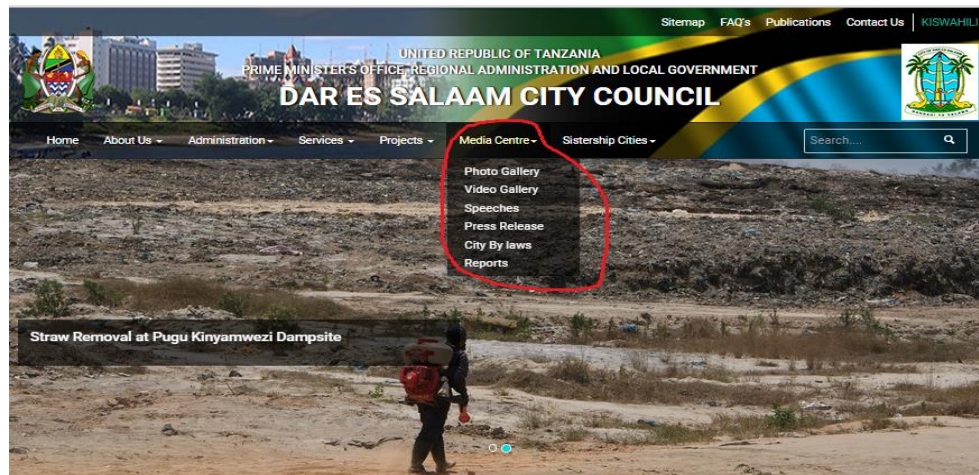


Fig 1.11 Media Centre

Source: Field Data (2015)

ii. The website contains outdated, incorrect and or lack of key information. It seems that there is no arrangement for regular website update with the current and correct information.

Fig 1.12 shows recent news and latest events regarding DCC, however the news was posted 5 and 6 months ago, while latest events posted are for March, August and September one event on each month. Both trends doesn't reflect reality of what is happening at the DCC thus a lot of information is not being released for the public consumption through DCC website.

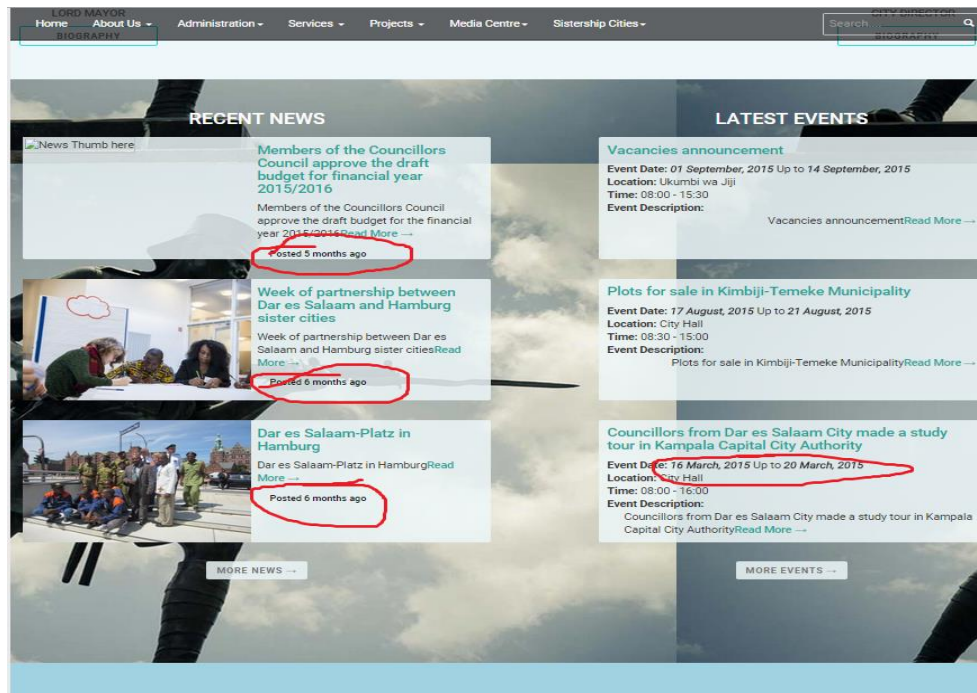


Fig 1.12 Recent News

Source: Field Data (2015)

Fig 1.13 shows city gallery – pictures, all pictures were last uploaded 7 months ago.

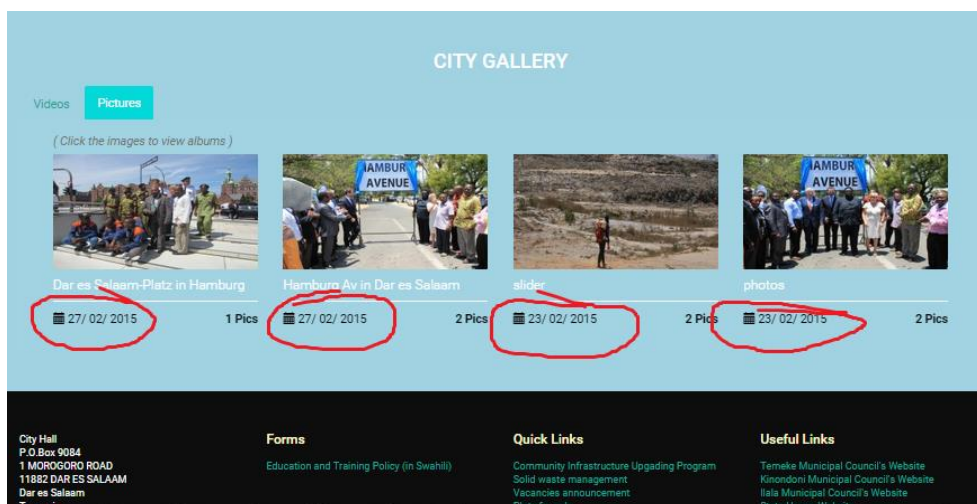


Fig 1.13 City Gallery

Source: Field Data (2015)

Fig 1.14 under contact details, the telephone number listed is incorrect (0222-2123551/5) based on the Tanzania telephone numbers standard, which could mislead whoever need to make a telephone call. Instead it was supposed to be written 022-2123551/5. Also the 022-2123555 when tested was found to be not functional.

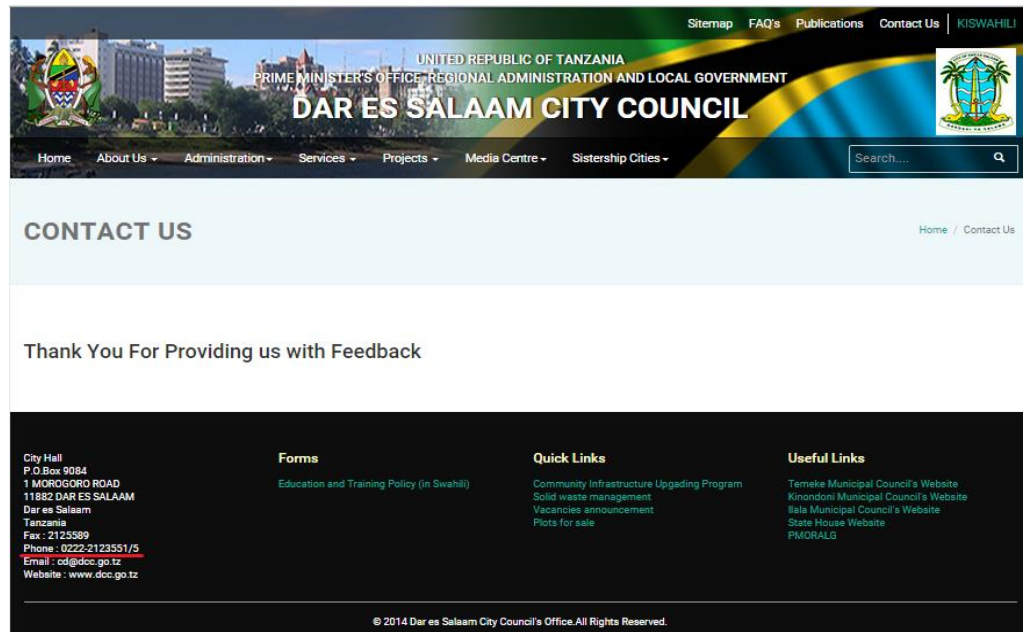


Fig 1.14

Source: Field Data (2015)

iii. Lacks website visit counts

The DCC website lacks the functionality to count number of website visits which could assist in providing feedback to the administration whether people do actually make use of the website or not by regularly checking the number of visits.

Appendix 4: Research Budget

S/NO	Activity description	Cost Tshs.
i.	Data collection	450,000/-
ii.	Internet services	240,000/-
iii.	Stationary	435,000/-
iv.	Meals during data collection	750,000/-
	Total	1,875,000/=

Appendix 5: Research Permission Letter

HALMASHAURI YA JIJI LA DAR ES SALAAM

BARUA ZOTE ZITUMWE KWA MKURUGENZI WA JIJI

P.O. BOX: 9084
SIMU: 2123551/5
FAX NA: 2125589
E-Mail: cd@dcc.go.tz

Kumb. Na. DCC/P/145



HALMASHAURI YA JIJI
"UKUMBI WA JIJI"
1 BARABARA YA MOROGORO
11882 DAR ES SALAAM
TANZANIA

Tarehe: 29 Juni, 2015

Mkuu wa Kitivo cha
 Biashara na Utawala,
 Chuo Kikuu Huria Tanzania
 Kinondoni
DAR ES SALAAM

YAH : KIBALI CHA NDG. LUSEKELO THOMSON MWAKYUSA
KUFANYA UTAFTITI

Tafadhali husika na somo tajwa hapo juu.
 Halmashauri ya Jiji la Dar es salaam inakiri kupokea barua yenye ombi
 tajwa hapo juu.

Kutokana na umuhimu wa utafiti huo kwa taasisi zetu hususani za
 Serikali ; Halmashauri haina pingamizi la ombi husika.

Kwa barua hii Halmashauri inatoa kibali kwa mtajwa ili kufanya utafiti
 kuhusiana na "Assessment of Effectiveness of E- Governant " na inaahidi
 kutoa ushirikiano wa kutosha ili kufanikisha utafiti huo ambao kama
 ulivyoomba utafanyika kati ya tarehe 01 Julai hadi tarehe 30 Agosti,
 2015.

Iman E. Kasagara
 Kny. **MKURUGENZI WA JIJI**
HALMASHAURI YA JIJI LA DAR ES SALAAM